ServerView Resource Orchestrator Cloud Edition V3.0.0

User's Guide
for Tenant Users

Windows/Linux

J2X1-7615-01ENZ0(05)
April 2012

Preface

Purpose

This document explains how to operate the ROR Console provided by ServerView Resource Orchestrator (hereafter referred to as "this product").

Target Readers

This document is intended for users who use the resources of a tenant that they own.

Organization

This manual is composed as follows:

Chapter 1 Overview

Explains an overview of the ROR Console ROR

Chapter 2 Home

Explains the ROR Console Home window

Chapter 3 System Condition

Explains how to monitor system condition

Chapter 4 L-Platform

Explains how to use the L-Platform

Chapter 5 Request

Explains how to operate the application list

Chapter 6 Account

Explains how to perform account operations

Glossary

Explains terms used in this document. Refer to the glossary as required.

Notational Conventions

The notation in this manual conforms to the following conventions.

- When using Resource Orchestrator and the functions necessary differ due to the necessary basic software (OS), it is indicated as follows:

[Windows]	Sections related to Windows
[Linux]	Sections related to Linux

- Reference destinations are shown enclosed by quotation marks (" ").

- Window, dialog, menu, tab, and button names are indicated using bold text.

Documentation Road Map

The following manuals are provided with Resource Orchestrator. Please refer to them when necessary:

Manual Name	Abbreviated Form	Purpose
ServerView Resource Orchestrator Cloud Edition V3.0.0 Setup Guide	Setup Guide CE	**Please read this first.** Read this when you want information about the purposes and uses of basic functions, and how to install Resource Orchestrator.
ServerView Resource Orchestrator Cloud Edition V3.0.0 Installation Guide	Installation Guide CE	Read this when you want information about how to install Resource Orchestrator.
ServerView Resource Orchestrator Cloud Edition V3.0.0 Operation Guide	Operation Guide CE	Read this when you want information about how to operate systems that you have configured.
ServerView Resource Orchestrator Cloud Edition V3.0.0 User's Guide for Infrastructure Administrators (Resource Management)	User's Guide for Infrastructure Administrators (Resource Management) CE	Read this when you want information about how to operate the GUI (resource management) used by infrastructure administrators and dual-role administrators.
ServerView Resource Orchestrator Cloud Edition V3.0.0 User's Guide for Infrastructure Administrators	User's Guide for Infrastructure Administrators CE	Read this when you want information about how to operate the GUI (for operations other than resource management) used by infrastructure administrators and dual-role administrators.
ServerView Resource Orchestrator Cloud Edition V3.0.0 User's Guide for Tenant Administrators	User's Guide for Tenant Administrators CE	Read this when you want information about how to operate the GUI used by tenant administrators.
ServerView Resource Orchestrator Cloud Edition V3.0.0 User's Guide for Tenant Users	User's Guide for Tenant Users CE	Read this when you want information about how to operate the GUI used by tenant users.
ServerView Resource Orchestrator Cloud Edition V3.0.0 Reference Guide for Infrastructure Administrators (Resource Management)	Reference Guide (Resource Management) CE	Read this when you want information about commands used by infrastructure administrators and dual-role administrators to manage resources, messages output by the system, and how to perform troubleshooting.
ServerView Resource Orchestrator Cloud Edition V3.0.0 Reference Guide for Infrastructure Administrators	Reference Guide CE	Read this when you want information about commands used by infrastructure administrators and dual-role administrators for purposes other than resource management.
ServerView Resource Orchestrator Cloud Edition V3.0.0 Messages	Messages CE	Read this when you want detailed information about the corrective actions for displayed messages.

In some cases, this document may refer to the Virtual Edition manuals shown below. Please refer to them when necessary:

Manual Name	Abbreviated Form	Purpose
ServerView Resource Orchestrator Virtual Edition V3.0.0 Setup Guide	Setup Guide VE	Read this when you want information about the purposes and uses of basic functions, and how to install Resource Orchestrator.
ServerView Resource Orchestrator Virtual Edition V3.0.0 Installation Guide	Installation Guide VE	Read this when you want information about how to install Resource Orchestrator.
ServerView Resource Orchestrator Virtual Edition V3.0.0 Operation Guide	Operation Guide VE	Read this when you want information about how to operate systems that you have configured.
ServerView Resource Orchestrator Virtual Edition V3.0.0 User's Guide	User's Guide VE	Read this when you want information about how to operate the GUI.
ServerView Resource Orchestrator Virtual Edition V3.0.0 Command Reference	Command Reference	Read this when you want information about how to use commands.

Manual Name	Abbreviated Form	Purpose
ServerView Resource Orchestrator Virtual Edition V3.0.0 Messages	Messages VE	Read this when you want detailed information about the corrective actions for displayed messages.

Abbreviations

The following abbreviations are used in this manual:

Abbreviation	Products
Windows	Microsoft(R) Windows Server(R) 2008 Standard Microsoft(R) Windows Server(R) 2008 Enterprise Microsoft(R) Windows Server(R) 2008 R2 Standard Microsoft(R) Windows Server(R) 2008 R2 Enterprise Microsoft(R) Windows Server(R) 2008 R2 Datacenter Microsoft(R) Windows Server(R) 2003 R2, Standard Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition Windows(R) 7 Professional Windows(R) 7 Ultimate Windows Vista(R) Business Windows Vista(R) Enterprise Windows Vista(R) Ultimate Microsoft(R) Windows(R) XP Professional operating system
Windows Server 2003	Microsoft(R) Windows Server(R) 2003 R2, Standard Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition
Linux	Red Hat(R) Enterprise Linux(R) 5 (for x86) Red Hat(R) Enterprise Linux(R) 5 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.1 (for x86) Red Hat(R) Enterprise Linux(R) 5.1 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.2 (for x86) Red Hat(R) Enterprise Linux(R) 5.2 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.3 (for x86) Red Hat(R) Enterprise Linux(R) 5.3 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.4 (for x86) Red Hat(R) Enterprise Linux(R) 5.4 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.5 (for x86) Red Hat(R) Enterprise Linux(R) 5.5 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.6 (for x86) Red Hat(R) Enterprise Linux(R) 5.6 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.7 (for x86) Red Hat(R) Enterprise Linux(R) 5.7 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.2 (for x86) Red Hat(R) Enterprise Linux(R) 6.2 (for Intel64)
VMware	VMware vSphere(R) 4 VMware vSphere(R) 4.1 VMware vSphere(R) 5
RHEL5-Xen	Red Hat(R) Enterprise Linux(R) 5.4 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.4 (for Intel64) Linux Virtual Machine Function

Abbreviation	Products
RHEL-KVM	Red Hat(R) Enterprise Linux(R) 6.2 (for x86) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.2 (for Intel64) Virtual Machine Function

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Month/Year Issued, Edition	Manual Code
November 2011, First Edition	J2X1-7615-01ENZ0(00)
January 2012, 1.1 Edition	J2X1-7615-01ENZ0(01)
January 2012, 1.2 Edition	J2X1-7615-01ENZ0(02)
February 2012, 1.3 Edition	J2X1-7615-01ENZ0(03)
March 2012, 1.4 Edition	J2X1-7615-01ENZ0(04)
April 2012, 1.5 Edition	J2X1-7615-01ENZ0(05)

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Editing Record

Additions and changes	Section	Edition
An article relating to the display name of configuration information was modified.	3.4	1.1 Edition
The term "logical node" was changed to "L-Server".	3.4	
An article relating to RHEL-KVM was added.	Chapter 3, Chapter 4	
An article relating to the priority of the task was added.	5.2	

Additions and changes	Section	Edition
The configuration for sections and sub-sections was modified.	Chapter 3	1.2 Edition
A table for description of CI list item was added.	3.2	
An article relating to usage fee (the estimated price) was added.	4.2.1, 4.2.2, 4.3.9, 4.3.11	
An article relating to batch power supply operations was added.	4.3.2, 4.3.9, 4.3.11	
An article relating to overcommit (Hyper-V) was added or modified.	4.3.11	
A 'note' relating to CPU performance, CPU reserve performance, memory size, or memory reserve size was added.	4.3.13	
An article relating to status confirmation of subscriptions was added.	5.1	
The window and article for the **Form** panel was added.	5.1, 5.2	
Red Hat(R) Enterprise Linux(R) 6.2 was added as product for the abbreviations Linux and RHEL-KVM.	Preface	1.3 Edition
A 'note' relating to L-Platform cancellation was added.	4.3.10	
A 'note' relating to pop-up blocker was added.	4.5	
An article relating to user ID information was modified.	1.6	1.4 Edition
A 'note' relating to L-Platform reconfiguration was modified.	4.3.9	
An article relating to user ID information was modified.	1.6	1.5 Edition
A note was added to the explanation of "sdattim" which was added on the CSV output table.	3.2.1	
The term "LDAP operation settings" was changed to "directory services operation settings".	6.1	
An explanation on "Migration" was added.	Glossary	

Contents

Chapter 1 Overview

This chapter explains the ROR Console.

1.1 Users

The ROR Console has the following users:

- Infrastructure Administrator

- Tenant Administrator

- Tenant user

Refer to "Glossary" for details on these roles.

1.2 Function List

This section explains the functions provided by ROR Console.

ROR Console has two parts: "operation windows for tenant administrators and tenant users" and "operation windows for infrastructure administrators".

Windows intended for Tenant Administrators and tenant users are provided for L-Platform and user information operations. These windows are configured by Tenant Administrators themselves, and have been provided to reduce the Infrastructure Administrator workload.

Operation windows and dashboard windows intended for Infrastructure Administrators are also provided for L-Platform and user information operations. These windows are provided to enable Infrastructure Administrators to display and operate all L-Platform and tenant information and to access important information quickly.

The ROR Console displays are customized for the user's role, to provide appropriate functions to each user. For example, tabs that the current user cannot operate are not displayed.

Figure 1.1 ROR Console
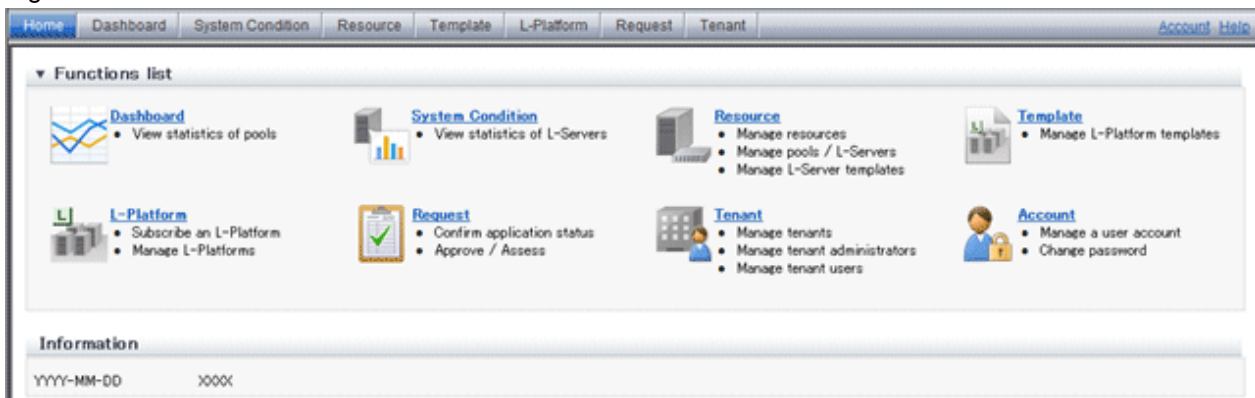
The table below shows the functions provided by the ROR Console.

These functions correspond to the tabs displayed at the top of the ROR Console.

Function	Overview	Infrastructure Administrator	Tenant Administrator	Tenant user
Home	The window displayed immediately after login to the ROR Console. A function list and notifications are displayed.	Yes	Yes	Yes
Dashboard	Displays the resource pool usage status	Yes	Yes	No

Function	Overview	Infrastructure Administrator	Tenant Administrator	Tenant user
System Condition	Displays L-Server performance information and configuration information	Yes	Yes	Yes
Resource	A window for managing the resource pool and the relationship of resources to L-Server	Yes	No	No
Template	A window for managing L-Platform Templates	Yes	Yes	No
L-Platform	A window for managing L-Platform	Yes	Yes	Yes
Request	A window for assessing and approving L-Platform usage applications and other applications from tenant users	Yes	Yes	Yes
Tenant	A window for managing tenants and users belonging to tenants	Yes	Yes	No
Account	A window for changing a logged in user's information and password	Yes	Yes	Yes
Help	Displays this product's manual	Yes	Yes	Yes

Yes: Displayed (However, some functions may not be displayed according to the user's access rights.)

No: Not displayed

Refer to Chapter 2, "Home", and subsequent chapters for details on these functions.

However, refer to the "User's Guide for Infrastructure Administrators (Resource Management) CE" for information on the "Resource" function.

1.3 Flow of Operations

This section explains the flow of operations using the ROR Console, from construction to operation, maintenance, and monitoring.

Flow from Construction to Operation (Tenant User)
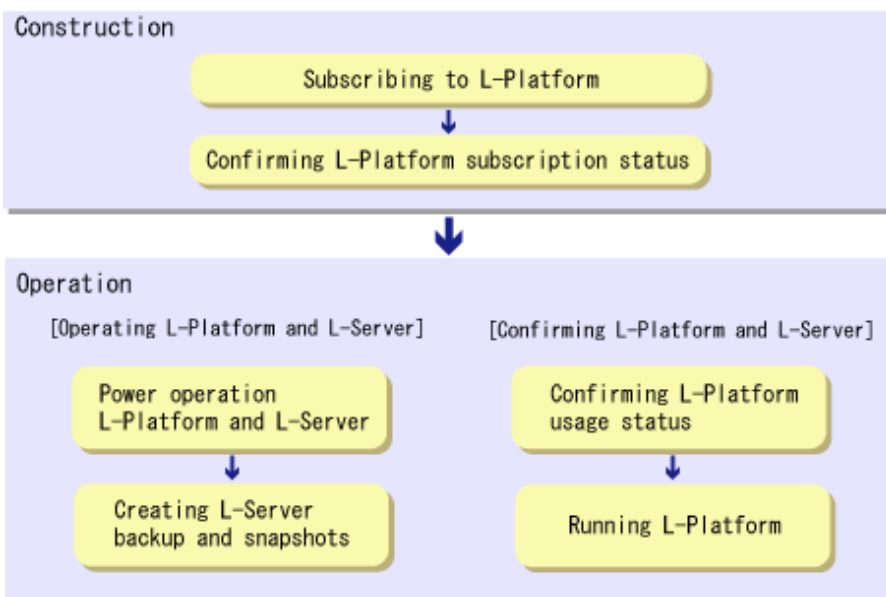
Construction

1. Subscribing to L-Platform
   Subscribe to L-Platform usage.
   Refer to "4.2 Subscribe to an L-Platform" for details.

2. Confirming L-Platform subscription status
   Check the L-Platform subscription status.
   Refer to "4.3 L-Platform Management" for details.

Operation

[Operating L-Platform and L-Server]

1. Power operation L-Platform and L-Server
   Perform L-Platform and L-Server power and other operations.
   Refer to "4.3.4 Start and Stop the Server" and "Power Operations" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" for details.

2. Creating L-Server backup and snapshots
   If required, create an L-Server backup snapshot.
   Refer to "4.3.6 Take and Restore Snapshot" and "4.3.7 Physical Server Backup and Restore" for details.

[Confirming L-Platform and L-Server]

1. Confirming L-Platform usage status
   Check the status of L-Platform disk usage and other usage.
   Refer to "Chapter 3 System Condition" for details.

2. Running L-Platform
   If required, add servers and disks for the L-Platform.
   Refer to "4.3.9 L-Platform Reconfiguration" for details.

1.4 Display

This section explains how to display the ROR Console.

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The ROR Console runs on any of the following browsers:

- Windows(R) Internet Explorer(R) 8

- Windows(R) Internet Explorer(R) 9

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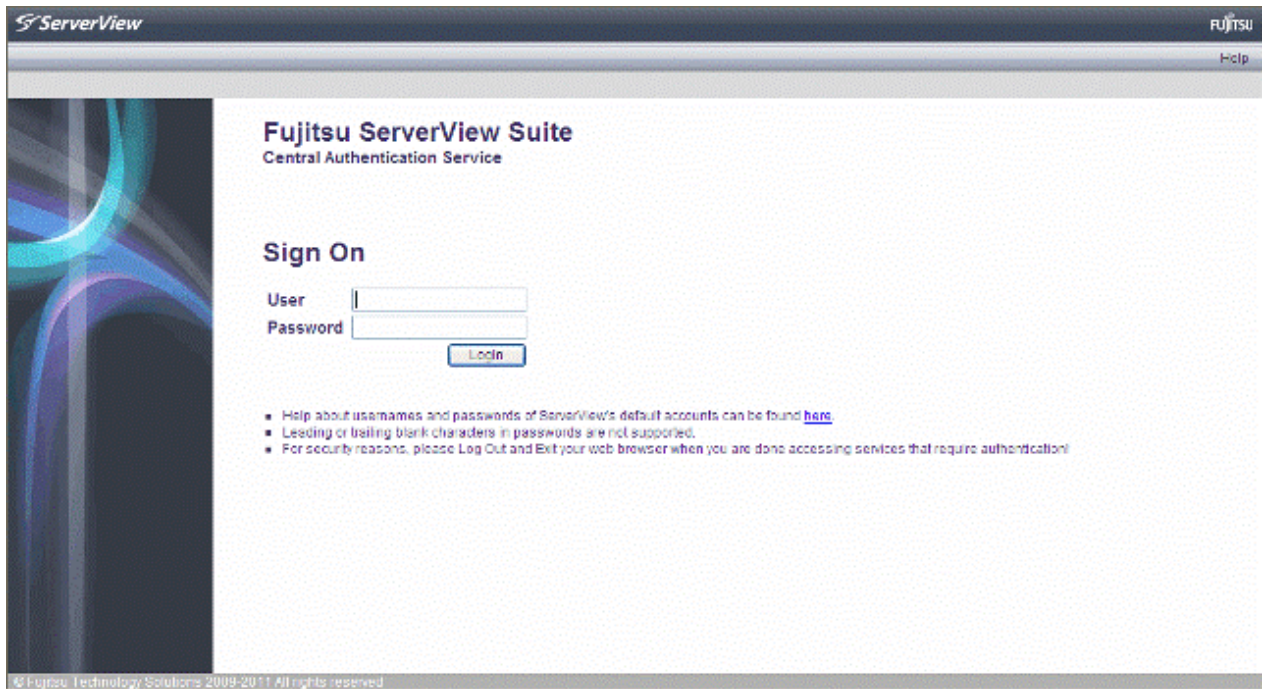
How to Display the ROR Console

Follow the steps below to display the ROR Console:

1. Start the Web browser.

2. Specify the URL of the ROR Console. Check the URL of the ROR Console with your system administrator.
   The following shows the format of the URL.

```
https://<host name of admin server>:<port number>/
```

3. The login window is displayed. Enter your user ID and password to log in.
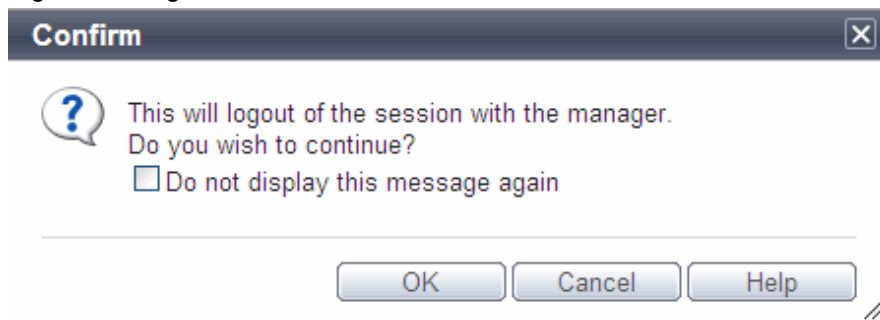
Figure 1.2 Login Window

4. The ROR Console is displayed.

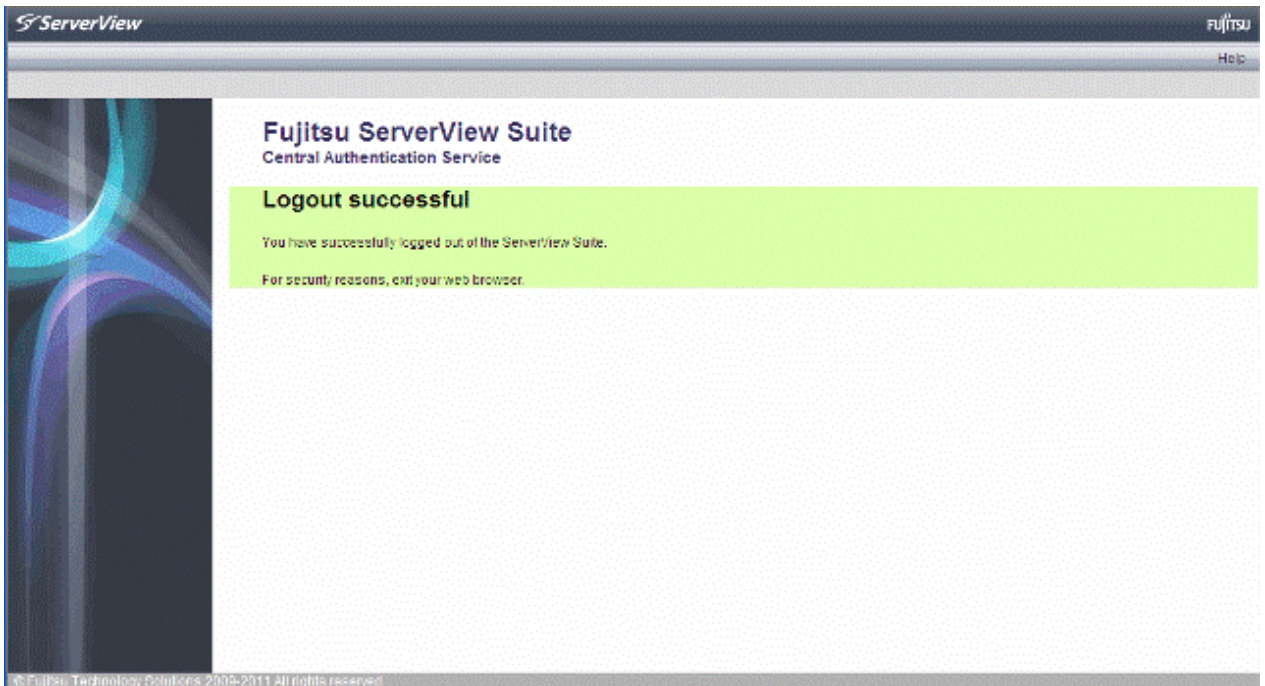## Logout

Follow the steps below to logout.

1. Click the **Logout** link at the upper-right of the ROR Console to log out. A window is displayed, confirming log out from ROR Console. Click the **OK** button to log out.

Figure 1.3 Logout Confirm Window

2. The logout window is displayed, close the browser.

Figure 1.4 Logout Window

1.5 Notes on Use of the ROR Console

This section explains the notes on the use of the ROR Console.

1.5.1 Surrogate Pair Characters

Surrogate pair characters cannot be used on the ROR Console.

1.5.2 Web Browser Settings

The following settings must be specified for the Web browser before using the ROR Console:

- Enable cookies.

- Enable JavaScript

- Use SSL 3.0 and TLS 1.0

- Specify either one of the following for the Web browser pop-up blocker:

    - Disable the pop-up blocker

    - Add the URL of the ROR Console to the **Address of web site to allow** setting.
      Check with the system administrator for the URL of the ROR Console.

1.5.3 ROR Console Operations

When logging in to the ROR console, a window displaying the message

"Internet Explorer cannot display the webpage" may be displayed.

Description

This problem can occur as a result of the following combinations of OS and web browsers being used.

Windows XP SP3 + Internet Explorer 8

Windows Server 2003 + Internet Explorer 8

Windows Server 2008 + Internet Explorer 8

Corrective Action

Take one of the following corrective actions.

- Connect using a combination of OS and web browser not listed above

- When this problem occurs, reload the page on your web browser

- Specify the IP address, not an FQDN, in the URL used for connection

1.5.4 Notification of User Password Setting

If the password is changed by tenant administrator, changed password will be sent to the user by E-mail with the title below. In this case, it is recommended to set a different password immediately.

```
Title of mail : [Important information]Setting of user password
```

1.6 New User Registration Tasks

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The following two methods are available for registering a tenant user:

- The tenant users perform user registration themselves using a virtual account that the Tenant Administrator has registered from the **Register User** window

- The Tenant Administrator registers a tenant user from the **Register User** window

The tenant user registration method is set by the system administrator.

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This section explains the registration tasks that should be performed by a user who has applied via the Tenant Administrator for new registration. A registration instruction email is sent to such a user.

Follow the registration procedures given in the instruction email.

Note that the registration application becomes invalid if the registration procedure is not performed within 24 hours of receiving the instruction email.

Follow the procedure below to register a new user:

1. Click the URL in the user registration mail.
   The **Register User** page will be displayed.

Item	Description
Temporary password	Specify the temporary password given in the tenant user registration mail.

2. Enter in the **Temporary password** field the temporary password given in the user registration mail. Review and agree with the license agreement, and click the **Advance to registration procedure** button.

The input window for the user information will be displayed.
The window below is the sample of using OpenDS for the directory service.

Item	Description
E-Mail address	User's E-mail address registered at a temporary account is displayed. It is not possible to change.
User ID	[When using OpenDS for the directory service] Specify a registration user ID. Specify a character string of 4 to 31 characters consisting of single-byte lower-case alphabetics and numerics, hyphens (-), underscores (_), and periods (.), and starting with a single-byte alphanumeric. This specification is mandatory. [When using Active Directory for the directory service] Specify a registration user ID. Specify a character string of 4 to 20 characters consisting of single-byte lower-case alphabetics and numerics, hyphens (-), underscores (_), and periods (.), and starting with a single-byte alphanumeric. Period cannot be used as the last character. This specification is mandatory.
Description	Specify a description for the user ID of the user, using up to 256 characters.
Password	Specify the user password. Specify between 8 and 64 characters, using single-byte alphanumerics and symbols. The specification is case sensitive. This field cannot be omitted.

Password (confirm)		Re-enter a user password for confirmation. This field cannot be omitted.
Personal information		
	Name	Specify the first name and last name separately for the user. Use up to 15 characters for each name. Be sure to specify this item.
	Company name or organization name	Specify the company name or organization name, using up to 30 characters.
Emergency contact details		
	E-mail address	Specify an email address for receiving emergency contact notifications, using up to 64 characters.
	E-mail address (confirm)	Re-enter an email address for receiving emergency contact notifications.
	Telephone number	Specify an emergency contact phone number.

3. Enter the user information and click the **Next** button.

   The confirmation window of the registration information will be displayed.

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4. Confirm the registration information, and click the **Register** button.
   The registration completion window will be displayed.
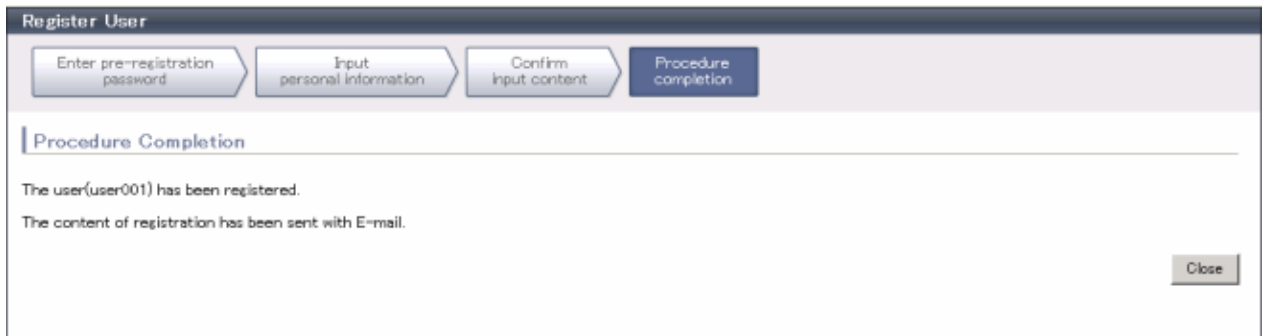
5. Click the **Close** button, processing is ended.

When user registration is completed, the registration content is sent to the registered user, the Tenant Administrator, and the tenant Email address.

Chapter 2 Home

This chapter explains the ROR Console Home window.

2.1 Home Window Display

This section explains the ROR Console Home window display.

When the ROR Console is started, the Home window is displayed. Refer to section "1.4 Display" for information on how to start the ROR Console.

The elements of the Home window are explained below.
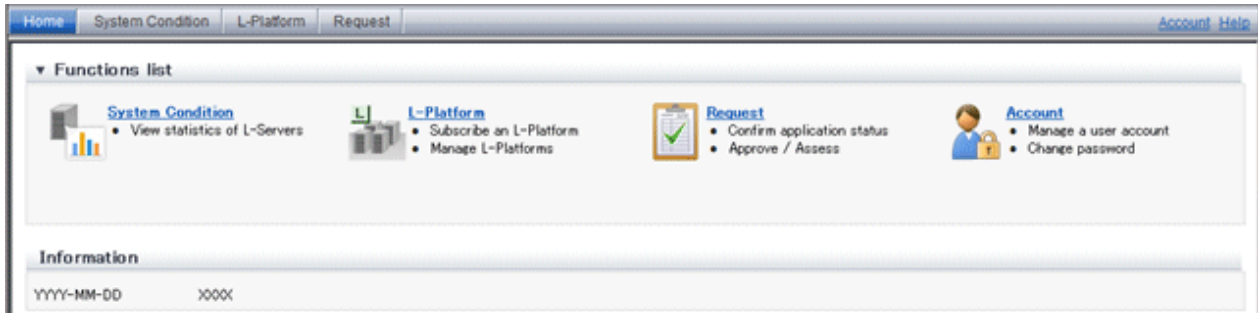
- Functions list
  The functions list displays the items that can be operated using ROR Console tabs.

  Click the ▼ icon or the ▶ icon to toggle Display/Hide.

- Information
  Information from the System Administrator and Infrastructure Administrator is displayed.

Chapter 3 System Condition

This chapter explains how to monitor system condition.

📒 Note

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The following message may be displayed during monitoring of system condition:

> The authority error occurred. Closing the browser.

This error occurs if, for example, the same user ID is used to log in from a different client. In this case, log in again correctly.

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3.1 System Condition Display Range

The system condition can display the following information for L-Platforms used by a tenant user:

- CPU utilization

- Disk R/W Usage

- Disk R/W count

- Memory usage

- Network usage

📒 Note

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For tenants

- The above information is not displayed for L-Servers incorporated in the system using the L-Server import function of this product.

- Disk R/W usage, disk R/W count, memory usage, and network usage are not displayed if the virtualization software is Hyper-V. However, if the dynamic memory setting is enabled, memory usage is displayed.

- Disk R/W usage is not displayed if the virtualization software is RHEL5-Xen.

- Disk R/W usage is not displayed if the virtualization software is RHEL-KVM.

- Network usage is not displayed if the physical L-Server is Linux.

For VM hosts

- Network usage is not displayed if the VM host virtualization software used is either RHEL5-Xen or RHEL-KVM.

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3.2 L-Platform System Condition Display

Perform the following steps to display the L-Platform system condition:

1. From the ROR Console, select the **System Condition** tab.

   The **System Condition** window is displayed.

2. In the **System Condition** window, select the **Tree Display** tab.

The configuration of L-Platforms used by tenant users is displayed in the tree at the left.
At **View**, the "L-Platform" showing a tree configuration is displayed as fixed. At **Record**, "Observed" - indicating the record type - is displayed as fixed.
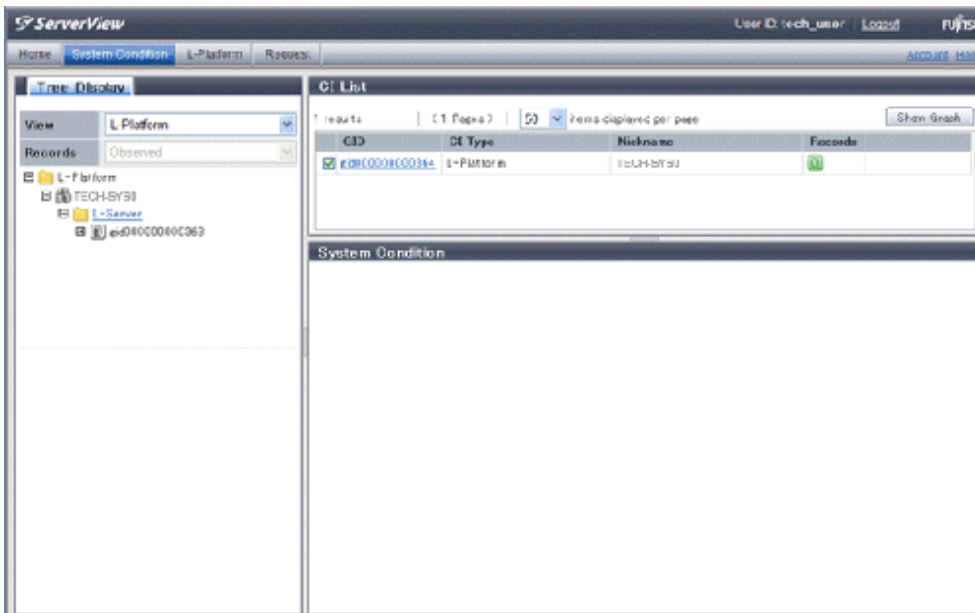
3. From the tree at the left, select the L-Platform for which to display the system condition.

The selected L-Platform is displayed in the CI list on the right.
If the "L-Platform" folder is selected in the tree, all L-Platforms under the folder are displayed in the CI list.

If an L-Server is selected in the tree, information about the selected server is displayed in the CI list.

The L-Platforms and L-Servers under each folder in the tree are displayed in descending order based on their update date and time.

4. Select an L-Platform in the CI list, and then click the **Show Graph** button.

The system condition is displayed in the lower part of the CI list. Refer to "3.2.1 System Condition Display" for details on the displayed system condition.

The table below explains the displayed items.

Item	Explanation
GID	Displays the identifier set by the system to identify the configuration item. If the CI list GID link is clicked, the configuration information of the target tenant, L-Platform or L-Server is displayed in a separate window. Refer to 3.2.2 Configuration Information Display" for the displayed configuration information.
CI Type	The CI types are as follows: - Tenant: If a tenant is selected - L-Platform: If an L-Platform is selected - L-Server: If an L-Server is selected
Nickname	Displays the display name of the configuration item. The following display names are displayed in accordance with the CI type: - For the tenant CI type: The tenant name determined during tenant registration ("tenant name (tenant ID)") - For the L-Platform CI type: The L-Platform subscription name set during L-Platform subscription

Item	Explanation
	- For the L-Server CI type: The L-Server name set during L-Platform subscription or L-Platform reconfiguration ("server name (host name)")
Record	Displays the type of records held by the configuration item. [0], indicating the actual information, is displayed.

📝 Note
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Clicking the CI list column headers to sort the columns is effective only for the range displayed in that page. The sorting specification is reset when the next or previous page is displayed. Sorting spanning multiple pages is not available.
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3.2.1 System Condition Display

The system condition of the L-Platforms selected in the system condition window CI list is displayed as a graph at **System Condition** in the lower part of the window. Up to five L-Servers can be displayed at once in the graphs. If more than five L-Servers are selected, the first five are displayed.

The system condition contents can be switched by clicking the **System Condition** tabs.

The table below shows the contents under the **System Condition** tabs.

Tab name	Display content (*1)	Graph type	Display interval	Display interval switching (*2)
Total	Totals for each status	Vertical bar graph	30 minutes, starting from the current time	Not possible
CPU	CPU utilization	Horizontal polyline graph	One hour/day/month/year from the current time	Possible
Disk	Disk R/W Usage (*3)	Horizontal polyline graph	One hour/day/month/year from the current time	Possible
	Disk R/W count (*4)	Horizontal polyline graph	One hour/day/month/year from the current time	Possible
Memory	Memory usage (*5)	Horizontal polyline graph	One hour/day/month/year from the current time	Possible
Network	Network usage (*6)	Horizontal polyline graph	One hour/day/month/year from the current time	Possible
All	Overview of all the above statuses	Horizontal polyline graph	One hour/day/month/year from the current time	Possible

*1: Information is displayed using a different color for each L-Server.

*2: The display interval can be switched to a shorter interval by clicking the data plotting area of a horizontal polyline graph, or switched to a longer interval by clicking outside the data plotting area.

*3: Disk usage and network usage are not displayed if the virtualization software is Hyper-V and RHEL5-Xen.

*4: The disk R/W count is not displayed if the virtualization software is Hyper-V and RHEL-KVM.

*5: The memory usage is not displayed if the virtualization software is Hyper-V. However, it is displayed if the dynamic memory setting is enabled.

*6: The network usage is not displayed if the virtualization software is Hyper-V and the physical L-Server is Linux.

📝 Note
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- Information obtained from virtualization software is displayed in the system condition. Virtual Memory usage is not included.

- The system condition data is not reflected in the display until collection at the fixed intervals shown below is completed. Check the display after the fixed intervals shown below.

  Note that, if the contents are empty after a fixed interval, the connection destination L-Platform may be stopped. Contact the Tenant Administrator.

Tab name	Display period (*)	Collection time required before displaying
Total	30 days	one whole day (from 0:00 to 23:59)
CPU Disk Memory Network	one hour	ten whole minutes (from 0 minutes to 9 minutes)
	one day	one whole hour (from 0 minutes to 59 minutes)
	one month/one year	one whole day (from 0:00 to 23:59)

   *: The display period in each tab except for Total tab can be selected from one hour, one day, one month, or one year.

- System condition data is not displayed if the power is off at the monitored L-Server.

- If the CPU utilization status continues at 100% at the monitored L-Server, data collection timing may be delayed and an error of about one second may occur. This may cause CPU utilization (average value for a specified unit of time) to exceed 100%. Take into account the possibility of data errors when using this display.

  Example:
  If a monitored L-Server has one CPU and is displayed in units of one hour, the value in the system condition graphs and CSV file data may be displayed as 100.03% (60.02 minutes (near equal 3601 seconds)/60 minutes) even though the upper limit for CPU utilization is 100%.

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Display examples for the **Total** tab and the **All** tab are shown below.

- **Total** tab
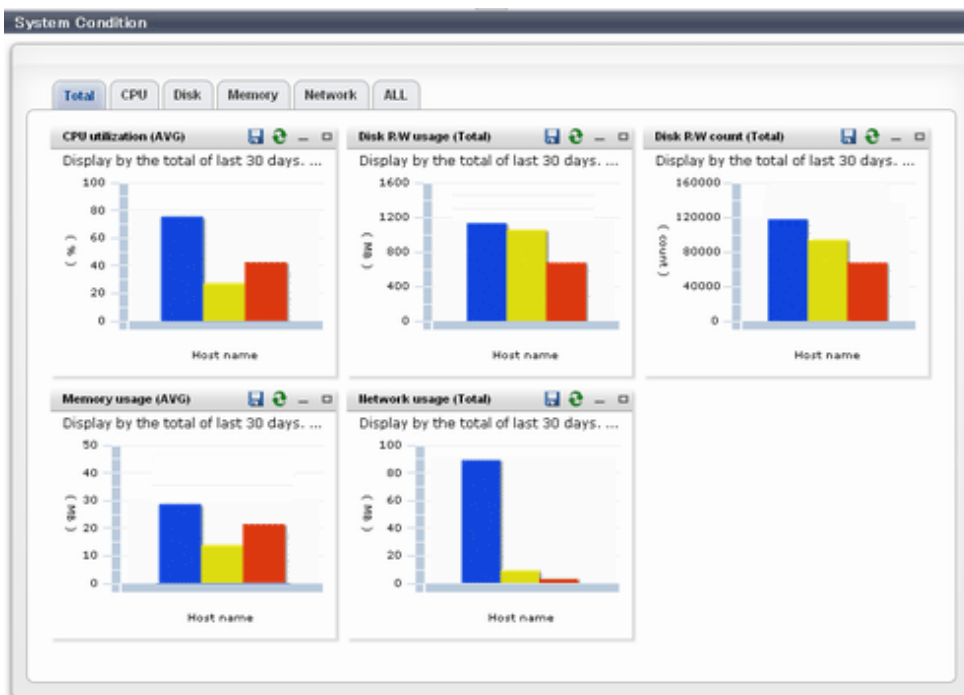
- **All** tab

At each tab, the following icons displayed in the title bar can be used:

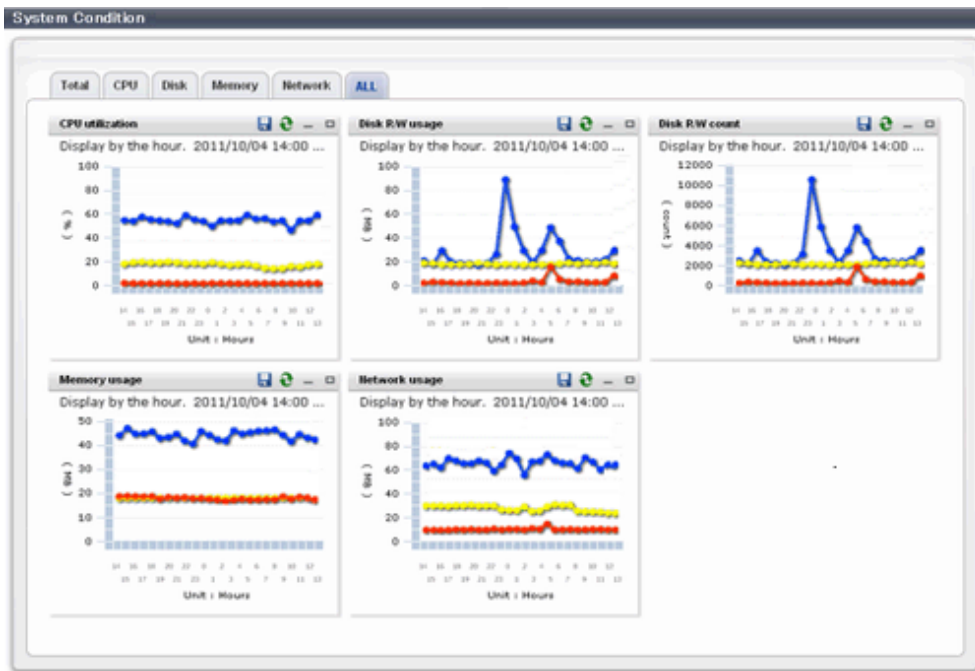| Icon	Tool tip	Explanation
🔄	Update	Updates the displayed contents
💾	Download CSV file	Downloads the graph data in CSV format
—	Minimize	Minimizes the specified window
□	Maximize	Maximizes the specified window
🗗	Restore	Restores the maximized window

The table below shows the CSV file items if data is downloaded from each graph.

Note that the CSV file encoding is Shift-JIS.

Graph type	Column name	Explanation	Unit	Description
CPU utilization	sdattim	Collection start time (*1)		yyyy/MM/dd HH:mm:ss
	resrcid	Resource ID		- in case of physical servers and Windows: "#" + CPU number or _Total - in case of physical servers and Linux: CPU number or _Total - in case of Hyper-V: VM name + ":Hv VP" + virtual Processer number
	recid	Record ID		Output any of the following - WIN_CPUBUSY - UX_CPUBUSY - VMW_GCPU

Graph type	Column name	Explanation	Unit	Description
				- HV_VCPU
				- XEN_CPU
				- KVM_CPU
	consintl	Interval time	second	- in case of interval time is 10 minutes: 600
				- in case of 1 hour: 3600
				- in case of 24 hour: 86400
	coverage	Data coverage	(0 to 1)	
	cpupcent	CPU utilization	%	Output only in case of physical servers and Windows/Linux Processer utilization
	vmgcused	CPU utilization	%	Output only for VMware Physical CPU utilization consumed per resource pool or a virtual machine
	physres	Physical CPU information or virtual CPU information		Output only for VMware
	ptrtim	CPU utilization	%	Output only for Hyper-V Utilization of virtual processors allocated to a virtual machine and consumed by hypervisor code
	xenpcused	CPU utilization	%	Output only for RHEL5-Xen CPU utilization (total utilization of virtual CPUs set in the domain)
	xencpun	Number of virtual CPUs in the domain	number	Output only for RHEL5-Xen
	Nickname	VM name		Output only for VMware/Hyper-V/ RHEL5-Xen
	kvmcpupcent	CPU utilization	%	Output only for RHEL-KVM CPU utilization (total utilization of virtual CPUs set in the domain)
	kvmcpus	Number of virtual CPUs in the domain		Output only for RHEL-KVM
Disk R/W Usage	sdattim	Collection start time (*1)		yyyy/MM/dd HH:mm:ss
	resrcid	Resource ID		- in case of physical servers and Windows: drive name or _Total
				- in case of physical servers and Linux: device name
	recid	Record ID		Output any of the following
				- WIN_PHYDISKBUSY
				- UX_DISKBUSY
				- VMW_DISK
				- KVM_DISK

Graph type	Column name	Explanation	Unit	Description
	consintl	Interval time	second	- in case of interval time is 10 minutes: 600 - in case of 1 hour: 3600 - in case of 24 hour: 86400
	coverage	Data coverage	(0 to 1)	
	preadbyt	Disk read usage	bytes	Output only for Windows
	pwritbyt	Disk write usage	bytes	Output only for Windows
	iokreads	Disk read usage	Kbytes	Output only for Linux
	iokwrite	Disk write usage	Kbytes	Output only for Linux
	vmdmbread	Disk read usage	Mbytes	Output only for VMware Disk read usage for virtual machine and storage device units
	vmdmbwrt	Disk write usage	Mbytes	Output only for VMware Disk write usage for virtual machine and storage device units
	Nickname	VM name		Output only for VMware/Hyper-V/ RHEL5-Xen
	kvmdiskblockrdby	Disk read usage	bytes	Output only for RHEL-KVM Disk read usage in the domain
	kvmdiskblockwrby	Disk write usage	bytes	Output only for RHEL-KVM Disk write usage in the domain
Disk R/W count	sdattim	Collection start time (*1)		yyyy/MM/dd HH:mm:ss
	resrcid	Resource ID		- in case of physical servers and Windows: drive name or _Total - in case of physical servers and Linux: device name
	recid	Record ID		Output any of the following - WIN_PHYDISKBUSY - UX_DISKBUSY - VMW_DISK
	consintl	Interval time	second	- in case of interval time is 10 minutes: 600 - in case of 1 hour: 3600 - in case of 24 hour: 86400
	coverage	Data coverage	(0 to 1)	
	preadsec	Disk read count		Output only for Windows Physical disk read operation count
	pwritsec	Disk write count		Output only for Windows Physical disk write operation count
	ioreads	Disk read count		Output only for Linux read count
	iowrite	Disk write count		Output only for Linux write count

Graph type	Column name	Explanation	Unit	Description
	vmdreads	Disk read count		Output only for VMware Disk read count for virtual machine and storage device units
	vmdwrites	Disk write count		Output only for VMware Disk write count for virtual machine and storage device units
	vbdrd	Disk read count		Output only for RHEL5-Xen Virtual block device read count
	vbdwr	Disk write count		Output only for RHEL5-Xen Virtual block device write count
	Nickname	VM name		Output only for VMware/Hyper-V/ RHEL5-Xen
Memory usage	sdattim	Collection start time (*1)		yyyy/MM/dd HH:mm:ss
	resrcid	Resource ID		- in case of physical servers and Windows: MEMORY - in case of physical servers and Linux: FREEMEM

	recid	Record ID		Output any of the following
				
				  - WIN_MEMORY
				
				  - UX_MEMFREE
				
				  - VMW_MEM
				
				  - HV_DMEM_VM
				
				  - XEN_MEM
				
				  - KVM-MEM

	consintl	Interval time		- in case of interval time is 10 minutes: 600 - in case of 1 hour: 3600 - in case of 24 hour: 86400
	coverage	Data coverage	(0 to 1)	
	comtot	Memory usage	bytes	Output only for Windows Commit size
	freememp	Memory usage	bytes	Output only for Linux Memory size utilization for user processes
	memuse	Memory usage	percent	Output only for Linux
	Vmgmtm	Memory usage	Mbytes	Output only for VMware Estimated working set size of resource pool and virtual machine units
	ppmemdmvm	Memory usage	Mbytes	Output only for Hyper-V Current memory capacity of virtual machine
	xenavm	Memory usage	Mbytes	Output only for RHEL5-Xen Memory capacity allocated to domain

Graph type	Column name	Explanation	Unit	Description
	Nickname	VM name		Output for VMware/Hyper-V/ RHEL5-Xen
	kvmmemused	Memory usage	Mbytes	Output only for RHEL-KVM Memory capacity allocated to domain
Network utilization	sdattim	Collection start time (*1)		yyyy/MM/dd HH:mm:ss
	resrcid	Resource ID		Output only for Windows Network device name
	recid	Record ID		Output any of the following - WIN_NET_INTERFACE - VMW_NET - XEN_NET - KVM-NET
	consintl	Interval time		- in case of interval time is 10 minutes: 600 - in case of 1 hour: 3600 - in case of 24 hour: 86400
	coverage	Data coverage	(0 to 1)	
	ifbytin	Network usage (received)	bytes	Output only for Windows Amount of received data(byte)
	ifbytot	Network usage (sent)	bytes	Output only for Windows Amount of sent data(byte)
	vmnpmvtr	Network usage (sent)	Mbits	Output only for VMware Amount of data transferred by virtual network device port unit
	vmnpmbrecv	Network usage (received)	Mbits	Output only for VMware Amount of data received by virtual network device port unit
	xenkbtx	Network usage (sent)	Kbytes	Output only for RHEL5-Xen Amount of data sent by virtual network interface
	xenkbrx	Network usage (received)	Kbytes	Output only for RHEL5-Xen Amount of data received by virtual network interface
	Nickname	VM name		Output only for VMware/Hyper-V/ RHEL5-Xen
	kvmnetrxby	Network usage (received)	bytes	Output only for RHEL-KVM Amount of data sent by virtual network interface
	kvmnettxby	Network usage (sent)	bytes	Output only for RHEL-KVM Amount of data received by virtual network interface

*1: When the information from the virtual L-server where the live migration was performed is output to CSV, the following phenomena may occur:

- Information for a certain point of time is output twice

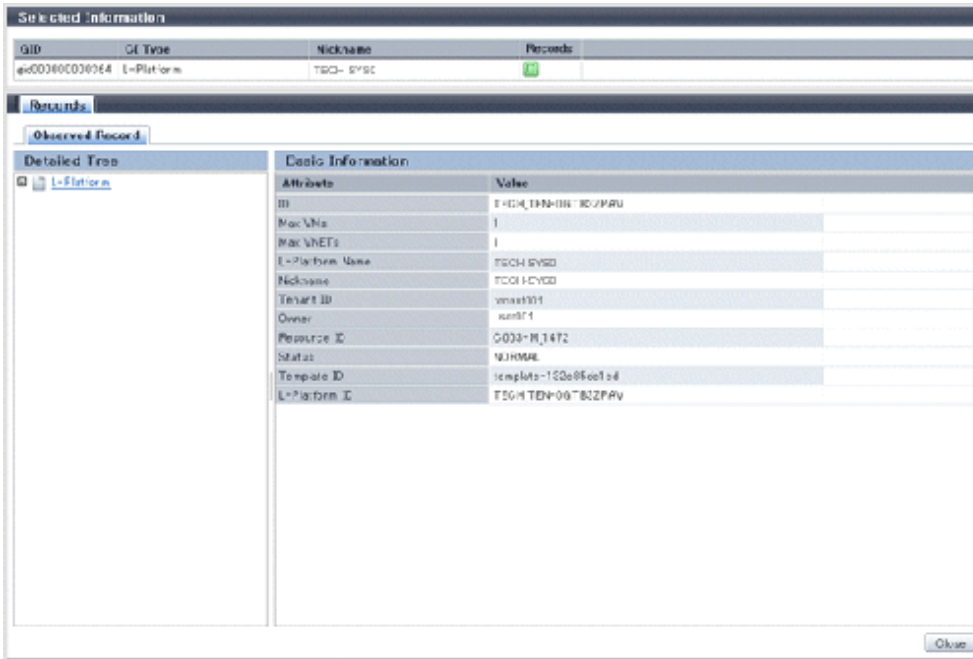- Information for a certain point of time is not output

If there is a large difference in the time and date in the VM host where the live migration was performed, the above phenomena will be more likely to occur.

3.2.2 Configuration Information Display

The tenant, L-Platforms and L-Servers displayed in the CI list of the system condition window are managed as configuration items (CIs).

When the GID link in the CI list of the system condition window is clicked, the configuration information of the target tenant, L-Platform or L-Server is displayed in a separate window.

A display example is shown below.

The table below explains the displayed items.

Item		Explanation
Selected Information	**GID**	Displays the identifier set by the system to identify the configuration item.
	CI Type	Displays the configuration item type. The CI types are as follows: - Tenant: If a tenant is selected - L-Platform: If an L-Platform is selected - L-Server: If an L-Server is selected
	Nickname	Displays the display name of the configuration item. The following display names are displayed in accordance with the CI type: - For the tenant CI type: The tenant name determined during tenant registration ("tenant name (tenant ID)") - For the L-Platform CI type: The L-Platform subscription name set during L-Platform subscription - For the L-Server CI type: The L-Server name set during L-Platform subscription or L-Platform reconfiguration ("server name (host name)")
	Record	Displays the type of records held by the configuration item. [0], indicating the actual information, is displayed.

Item			Explanation
Record	**Detailed Tree**		This is a tree of the elements comprising the configuration item. The following elements are displayed in accordance with the CI type: - For the tenant CI type: Tenants - For the L-Platform CI type: Instances - For the L-Server CI type: L-Server node information When an element is selected, the element attribute values are displayed in the basic information. Values are displayed as attribute values, and differ depending on the element: - If the element is a tenant: The value determined during tenant registration - If the element is an instance: The value set during L-Platform subscription - If the element is L-Server node information: The value set during L-Platform subscription or L-Platform reconfiguration
	Basic Information	**Attribute**	Displays the attribute name. When the label in the upper part is clicked, items can be sorted by attribute name.
		Value	Displays the attribute value. When the label in the upper part is clicked, items can be sorted by attribute value.
Close button			When this button is clicked, the window closes.

Chapter 4 L-Platform

This chapter explains how to use the L-Platform.

4.1 Display L-Platform

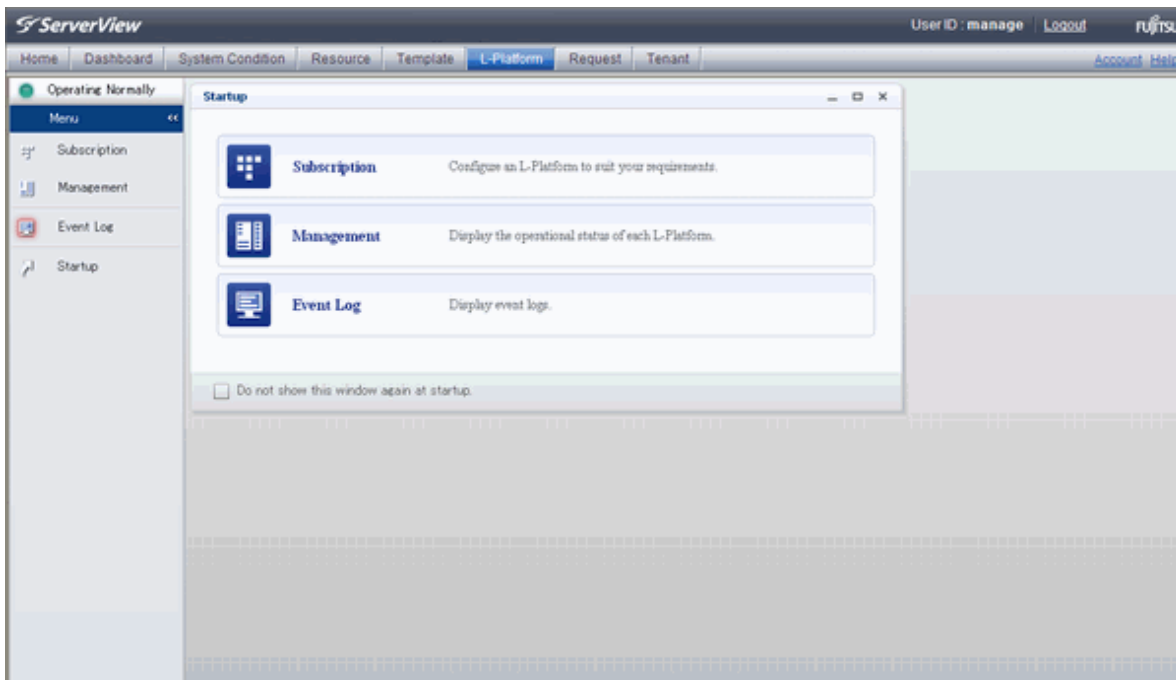This section explains how to display the L-Platform and describes the top page.

How to display the L-Platform

To display the L-Platform:

- On the ROR Console after login, select the **L-Platform** tab.

L-Platform Top Page

An example of the L-Platform home page is shown below.

The following section explains the contents of the L-Platform operation menu:

- L-Platform Subscription
  When **Subscription** is selected, the page used to subscribe to a service will be displayed.
  Refer to "4.2 Subscribe to an L-Platform" for the L-Platform management method.

- L-Platform Management
  When Management is selected, a list of created L-Platforms is displayed.
  Refer to "4.3 L-Platform Management" for the L-Platform management method.

- Event logs
  When Event Log is selected, logs of information about errors that have occurred while using the L-Platform functions will be displayed.

  Refer to "4.4 Display Event Logs" for the event log display method.

- Startup
  When Startup is selected, major functions of L-Platform and their overview will be displayed.

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The **Startup** page is displayed as the home page of L-Platform. To prevent the **Startup** page from being displayed as the home page, select the **Do not show this window again at startup** check box.

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- **Close** link
  When **Close** link is clicked, the confirmation window for closing the window will be displayed. Click **Yes** on the confirmation window to close the L-Platform window.

Note

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- If it becomes impossible to connect by the management server stop and etc. when L-Platform is being operated, the lamp in the menu becomes gray and the message "Not Operating" is displayed. In this case, contact the system administrator. According to the displayed window and the performed operation, an error message like the following may be displayed.

  - Failed to get system configuration.

  - Failed to get the access right.

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4.2 Subscribe to an L-Platform

This section explains how to subscribe to an L-Platform

4.2.1 Subscribe to a New L-Platform

On the **Subscription** page of L-Platform, the user can subscribe to an L-Platform on the basis of the specification that has been registered.

Two methods are available to subscribe to a new L-Platform. The method to be used is determined by the method of subscription that the Infra administrator department has specified.

- L-Platform Template reconfiguration not possible
  Changes to registered L-Platform Templates are not permitted.

- L-Platform Template reconfiguration possible
 Changes to registered L-Platform Templates are permitted.

The procedure for each method is shown below.

### L-Platform Template Reconfiguration not Possible

Follow the steps below to subscribe to a new L-Platform:

1. Select **Subscription** on the operation menu of **New L-Platform** page.
   The **Subscription** page will be displayed.

2. Confirm the procedures on the **Subscription** page, and click the **Subscribe a new L-Platform** button.
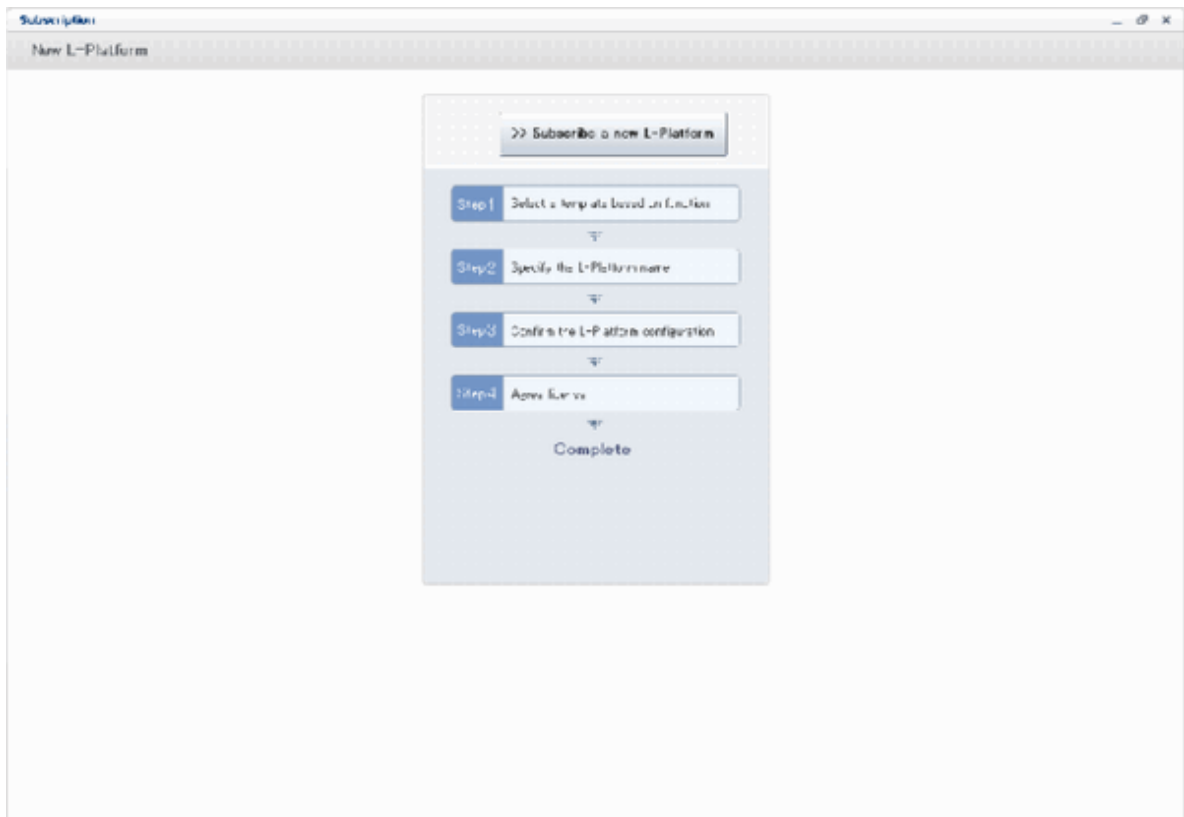
3. Confirm the contents of the L-Platform template on the **Select Template** page, and select L-Platform template to be used.
   All the L-Platform templates that are registered in the L-Platform and enabled are displayed on the **Select Template** page.

   For each L-Platform template, the corresponding estimated fees will also be displayed.
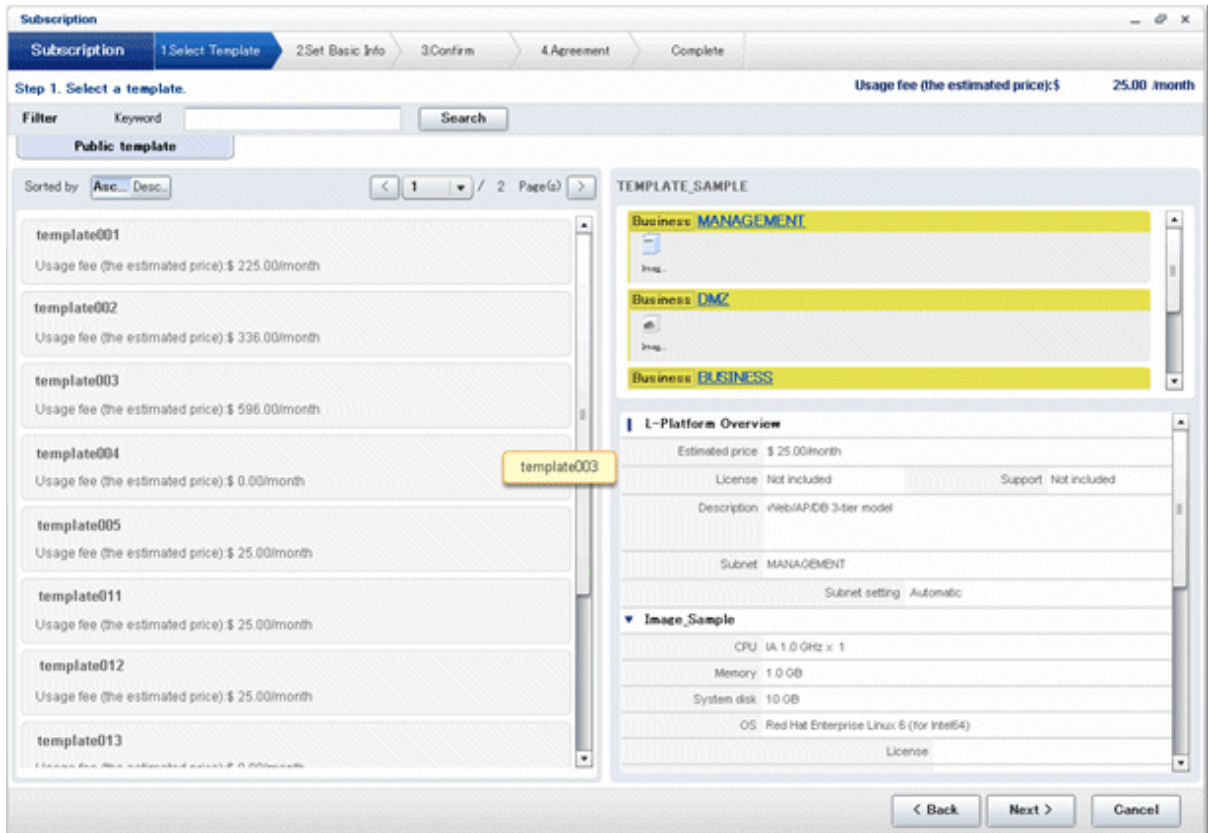
L-Platform templates are displayed by the L-Platform template name in ascending order. The sequence in the specification display can be switched by clicking **Sorted by** followed by the **Ascending order** or **Descending order** button.

To search an L-Platform template using the keyword search function, enter **Keyword** and then click the **Search** button. Specify a character string in **Keyword** that is the keyword for the L-Platform template the user wants to use. When a keyword is specified, a search takes place based on the keywords that the Infra administrator set in the specifications. The keyword search function cannot be used if the Infra Administrator did not set keywords.
For example, to search a specification where Red Hat Linux 5.1 is installed as the operating system, specify "Linux 5.1".

Point
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Estimated fees for the L-Platform template will only be displayed when the charges display is set to enabled.
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4. Select the L-Platform template to be used and click the **Next** button.
   The **Set Basic Info** page will be displayed.

The **L-Platform Name** displays the L-Platform template name.
To change to an arbitrary name, the new name must be no more than 85 characters long, be unique within the organization and not include the following characters:

```
<  >  &  '  " and control characters
```

However, the strings and the number of characters that can be specified may vary depending on the L-Platform settings.
It is recommended that the name be specified using no more than 23 of the following characters:

```
Alphanumeric characters, underscores ("_") and hyphens ("-")
```

5. Enter a name to **L-Platform Name**, and click the **Next** button.
   The **Confirm** page will be displayed.

Point

CSV output

When the **Save as CSV** button is clicked, the **Select the destination to save** window is displayed where the L-Platform Template configuration can be saved as a CSV file.
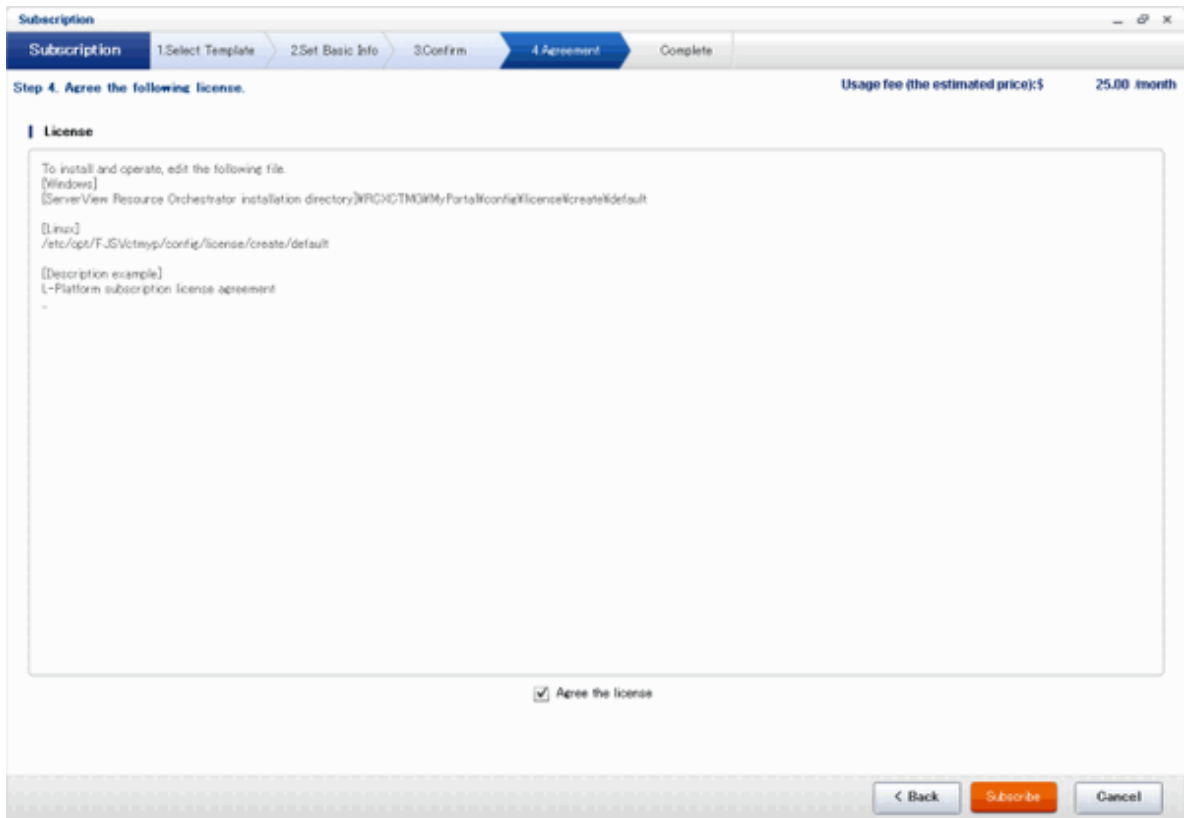The CSV file name is in the following format:

```
SystemConfiguration (+ <L-Platform name >+)_ <date> + .csv
```

Save configuration

By clicking the **Save Configuration** button, the L-Platform template is saved, and the display returns to the **Subscription** page. The saved L-Platform template can be subscribed by clicking the **Create from saved L-Platforms** button on the **Subscription** page.

6. Check the displayed contents of the L-Platform template, and click the **Next** button.
   When the **Next** button is clicked, the **Agreement** page will be displayed.

7. Check the license agreement displayed. Select the **Agree the license** check box, then, click the **Subscribe** button.
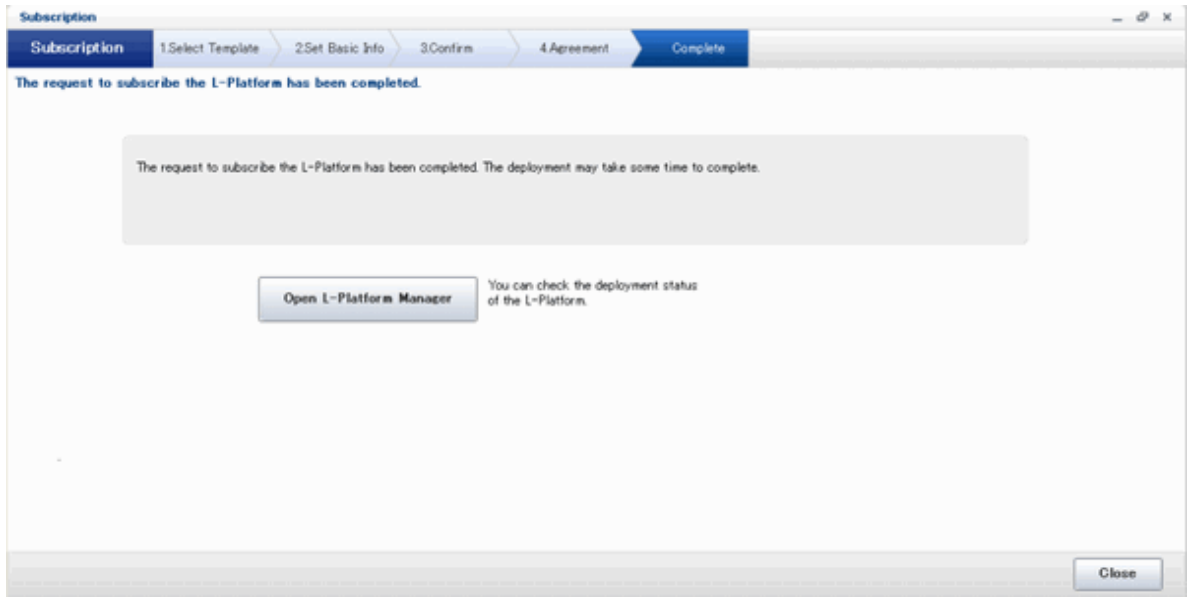
ⓟ Point

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When the application process is enabled, clicking of the **Subscribe** button on the **Agreement** page displays the **Forward screen** window. Refer to "4.5 Select Forward Destination of Application Process" for details.

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The **Complete** page will be displayed when the subscription to the L-Platform is accepted.

- When the application process is disabled

  The following message will be displayed:
  "A request to subscribe the L-Platform has been completed. The deployment may take some time to complete."

- When the application process is enabled

  The following message will be displayed:
  "The request to subscribe the L-Platform has been completed. The L-Platform will be deployed after approval and/or judgement procedures."

8. Click the **Close** button. The display returns to the **Subscription** page.

📘 Point
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When a subscribed L-Platform is deployed, a subscription completion notification email is sent to the subscriber. This email contains the information necessary to access the L-Platform.

If deployment of the subscribed L-Platform fails, a subscription failure notification email is sent to the subscriber and the Infrastructure Administrator. In this case, check with the Infrastructure Administrator, and then subscribe again.
. . . .

L-Platform Template Reconfiguration Possible

Follow the steps below to subscribe to a new L-Platform:

1. Select **Subscription** on the operation menu of the **Subscription** page.
   The **Subscription** page will be displayed.

2. Confirm the procedures on the **Subscription** page, and click the **Subscribe a new L-Platform** button.

3. Confirm the contents of the L-Platform templates on the **Select Template** page, and select the L-Platform template to be used.
   All the L-Platform templates that are registered in the L-Platform and enabled are displayed on the **Select Template** page.

   For each L-Platform template, the corresponding estimated fees will also be displayed.
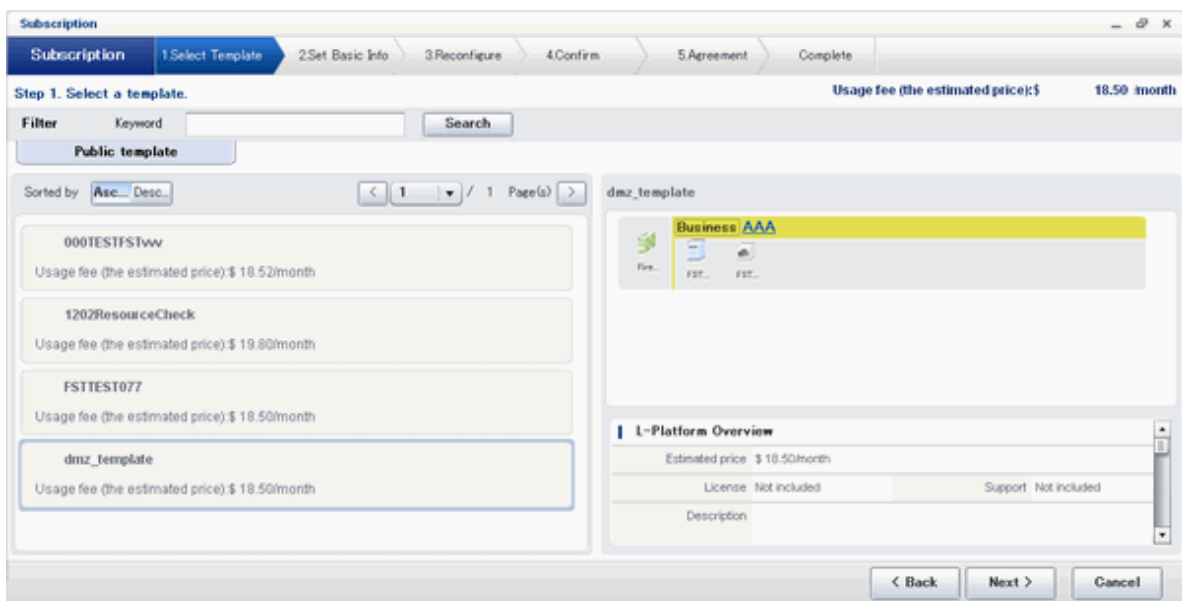
L-Platform templates are displayed by the L-Platform template name in ascending order. The sequence in the specification display can be switched by clicking **Sorted by** followed by the **Ascending order** or **Descending order** button.

To search a specification using the keyword search function, enter **Keyword** and then click the **Search** button.
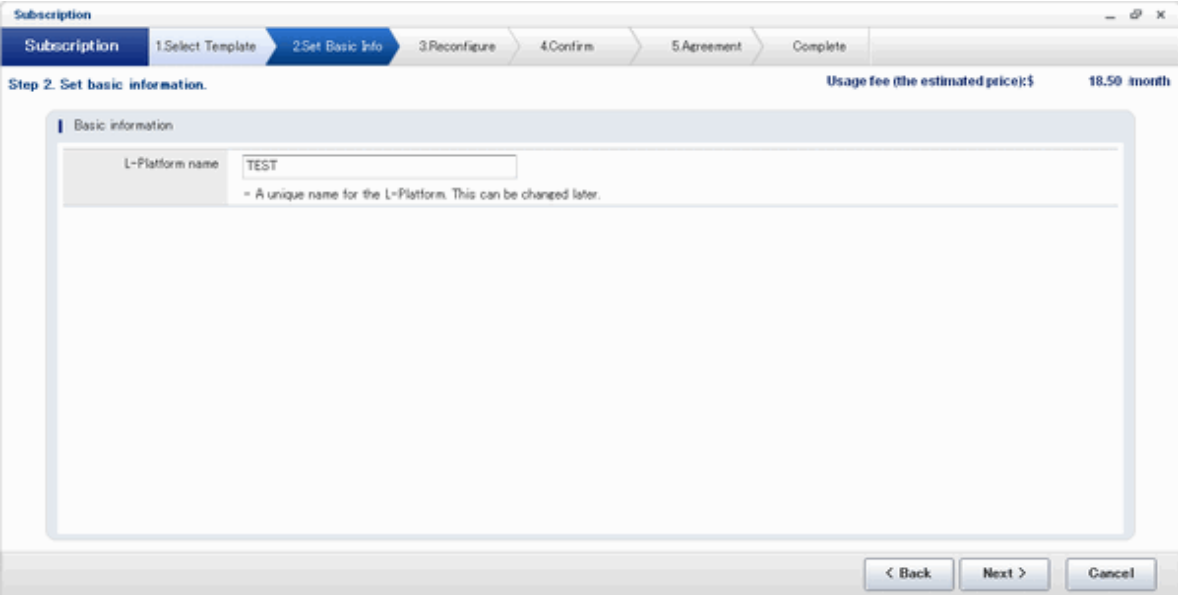
Specify a character string in **Keyword** that is the keyword for the L-Platform template the user wants to use. When a keyword is specified, a search takes place based on the keywords that the infra administrator set in the specifications. The keyword search function cannot be used if the infra administrator did not set keywords.

For example, to search an L-Platform template where Red Hat Linux 5.1 is installed as the operating system, specify "Linux 5.1".

P Point

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Estimated fees for the L-Platform template will only be displayed when the charges display is set to enabled.

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4. Select the L-Platform template to be used and click the **Next** button.
    The **Set Basic Info** page will be displayed.

The **L-Platform Name** is displayed by the L-Platform template name.

To change to an arbitrary name, the new name must be no more than 85 characters long, be unique within the organization and not include the following characters:

```
<, >, &, ', " and control characters
```

However, the strings and the number of characters that can be specified may vary depending on the L-Platform settings.
It is recommended that the name be specified using no more than 23 of the following characters.

```
Alphanumeric characters, underscores ("_") and hyphens ("-")
```

5. Enter a name to **L-Platform Name**, and click the **Next** button.
The **Reconfigure** page will be displayed.
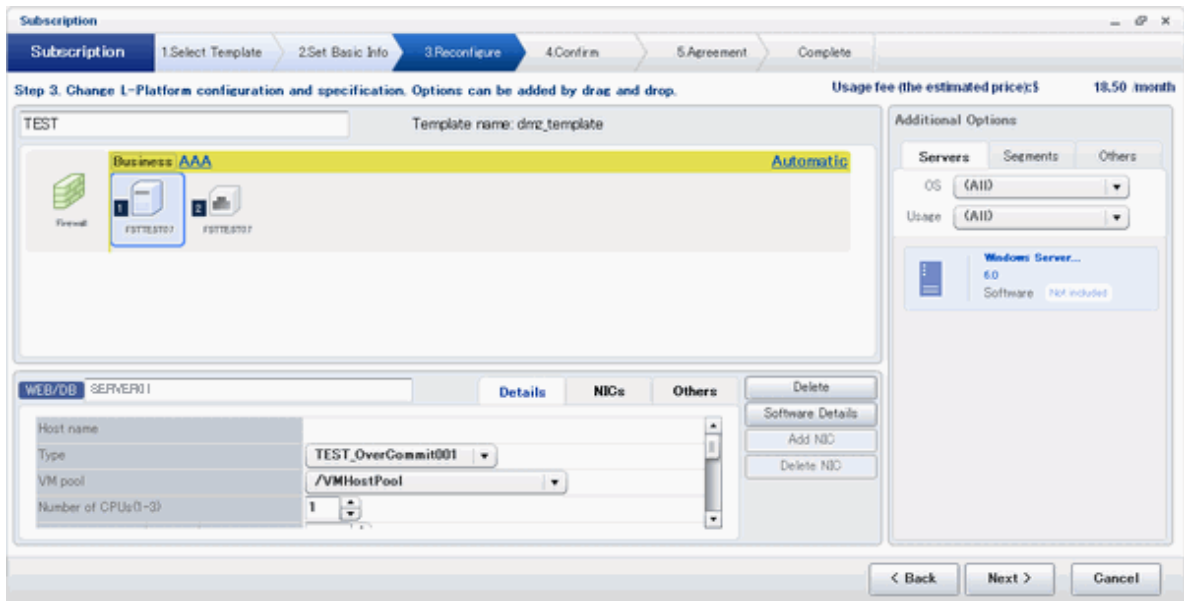
6. This will display the configuration of the L-Platform template selected on the **Reconfigure** page. Change the configuration as required.
For the items that can be changed on the **Reconfigure** page, refer to "4.3.11 Reconfiguration Page".

7. When modification of the L-Platform template has completed, click the **Next** button.
The **Confirm** page will be displayed.
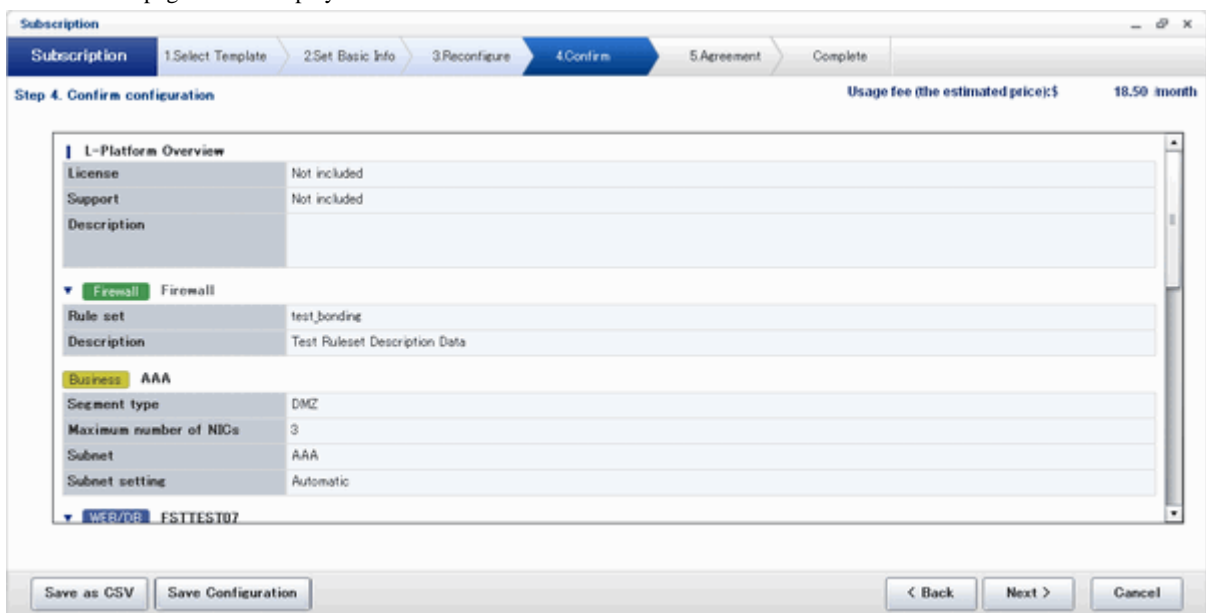
Item	Display format
Item changed	The values of changed items are displayed in red. The value before the change is displayed as "changed from *the old value*".
Item added	"* added" is displayed after added elements. The values of added items are displayed in red. The background of added items is also displayed in red.
Item deleted	"* deleted" is displayed after deleted items. The background of deleted items is displayed in grey.

Point

CSV output

When the **Save as CSV** button is clicked, the **Select the destination to save** window is displayed where the L-Platform Template configuration can be saved as a CSV file.
The CSV file name is in the following format:

```
SystemConfiguration (+ <L-Platform name> +)_ <date> + .csv
```

Save configuration

By clicking the **Save Configuration** button, the L-Platform template is saved, and the display returns to the **Subscription** page. The saved L-Platform template can be subscribed by clicking the **Create from saved L-Platforms button** on the **Subscription** page.

8. Check the displayed contents of the specification, and click the **Next** button.
   When the **Next** button is clicked, the **Agreement** page will be displayed.

9. Review and agree with the license agreement displayed. Select the **Agree the license** check box, then, click the **Subscribe** button.

Point

When the application process is enabled, clicking of the **Subscribe** button on the **Agreement** page displays the **Forward screen** window. Refer to "4.5 Select Forward Destination of Application Process" for details.

The **Complete** page will be displayed when the subscription to the L-Platform is accepted.

- When the application process is disabled

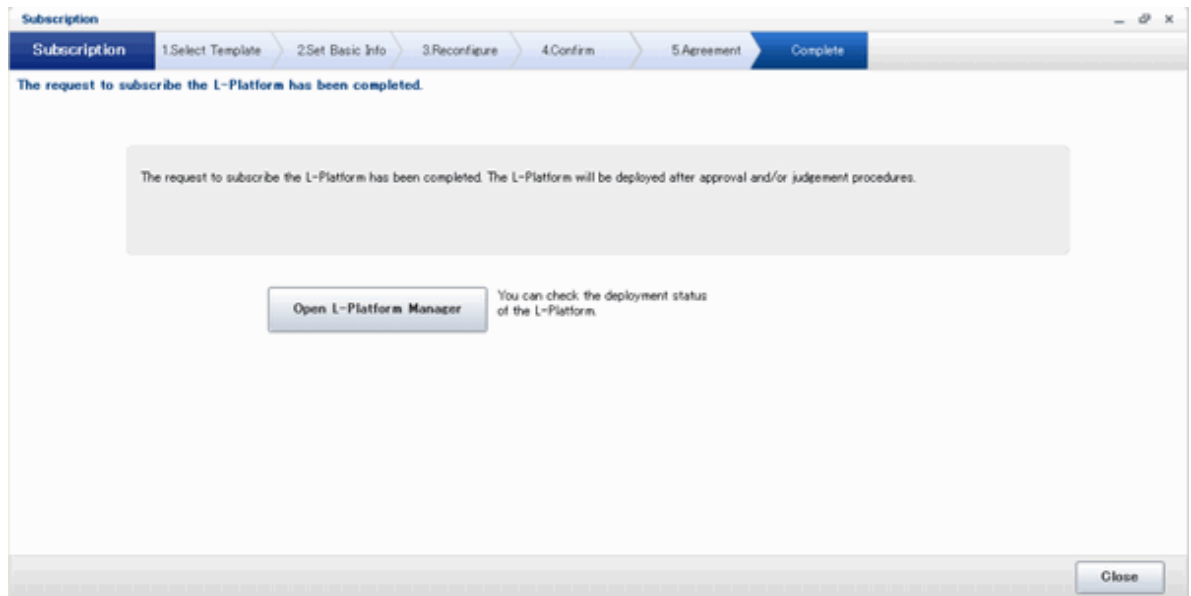 The following message will be displayed:
 "A request to subscribe the L-Platform has been completed. The deployment may take some time to complete."

- When the application process is enabled

 The following message will be displayed:
 "The request to subscribe the L-Platform has been completed. The L-Platform will be deployed after approval and/or judgement procedures."

10. Click the **Close** button. The display returns to the **Subscription** page.

Point

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When a subscribed L-Platform is deployed, a subscription completion notification email is sent to the subscriber. This email contains the information necessary to access the L-Platform.

If deployment of the subscribed L-Platform fails, a subscription failure notification email is sent to the subscriber and the Infrastructure Administrator.

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4.2.2 L-Platform Subscription after Saving Configuration

An L-Platform subscription can be submitted on the basis of an L-Platform Template for which the configuration is currently being saved.

Perform the following steps to submit an L-Platform subscription from this type of L-Platform Template:

1. Select **Subscription** on the operation menu of the **Subscription** page.
   This will display the procedures required to subscribe to an L-Platform.

2. After confirming the procedure, select **Subscribe from saved data**.
   The **Select Template** page will be displayed.
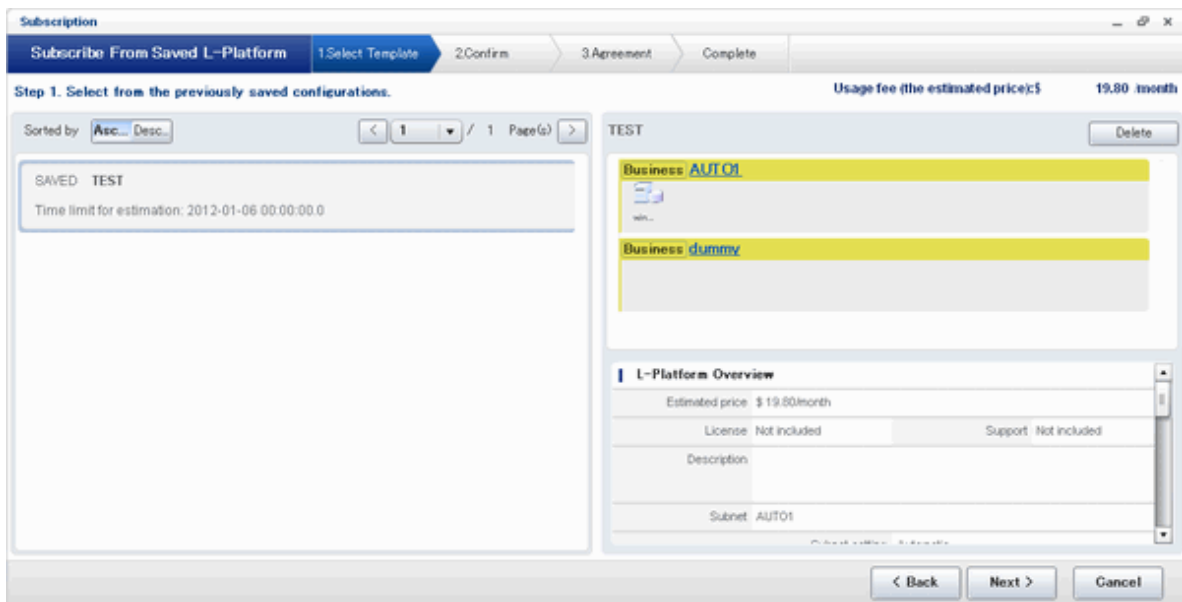
The time limit for estimating is displayed in each L-Platform templates.

When an L-Platform Template is selected from the L-Platform Template list, detailed information about the estimated fees and L-Platform Template at the time when the L-Platform Template was saved is displayed.

When the application process is enabled, the following status will be displayed before the L-Platform template names in the list of L-Platform templates:

- SAVED: Specification being saved
  The **Next** button will become available after selecting this item.

- UNAPPROVAL: Not approved
  The **Next** button will not become available even after selecting this item.

- REJECTION: Subscription rejected
  The **Next** button will not become available even after selecting this item.

Note

In the application process, the L-Platform templates waiting to approve or to assess become the UNAPPROVAL state.

If you want to delete the L-Platform templates which state is UNAPPROVAL, cancel the corresponding application from application list of L-Platform. After canceling, it is deleted automatically.

When you delete the L-Platform templates which state is UNAPPROVAL on L-Platform template, errors occurs because there is no L-Platform template in processing the application process.

The L-Platform template which is rejected or dismissed at application process becomes REJECTTION state.

Delete it from L-Platform after the confirmation if necessary.
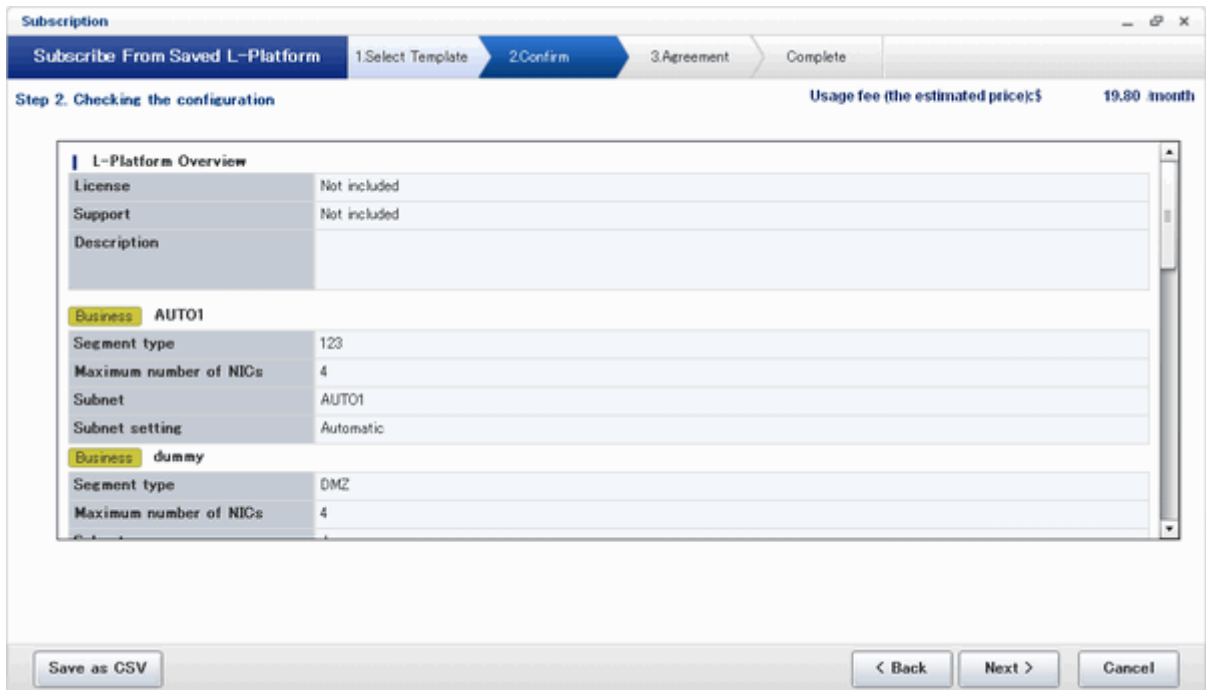
Point

Estimated fees and quotation expiry dates for the L-Platform template will only be displayed when the charges display is set to enabled.
Note also that the estimated fees will display the price at the time the L-Platform template was saved. In particular, please be aware that this display will not change even if the price of the L-Platform is modified.
Furthermore, the displayed quotation expiry date is based on the validity period of estimated fees for the L-Platform template, and indicates the 30th day after the L-Platform template was saved.

3. Select the L-Platform template to be used and click the **Next** button
   The **Confirm** page will be displayed.

4. Check the displayed contents of the L-Platform template, and click the **Next** button.
   When the **Next** button is clicked, the **Agreement** page will be displayed.

5. Review and agree with the license agreement displayed. Select the **Agree the license** check box, then, click the **Subscribe** button.
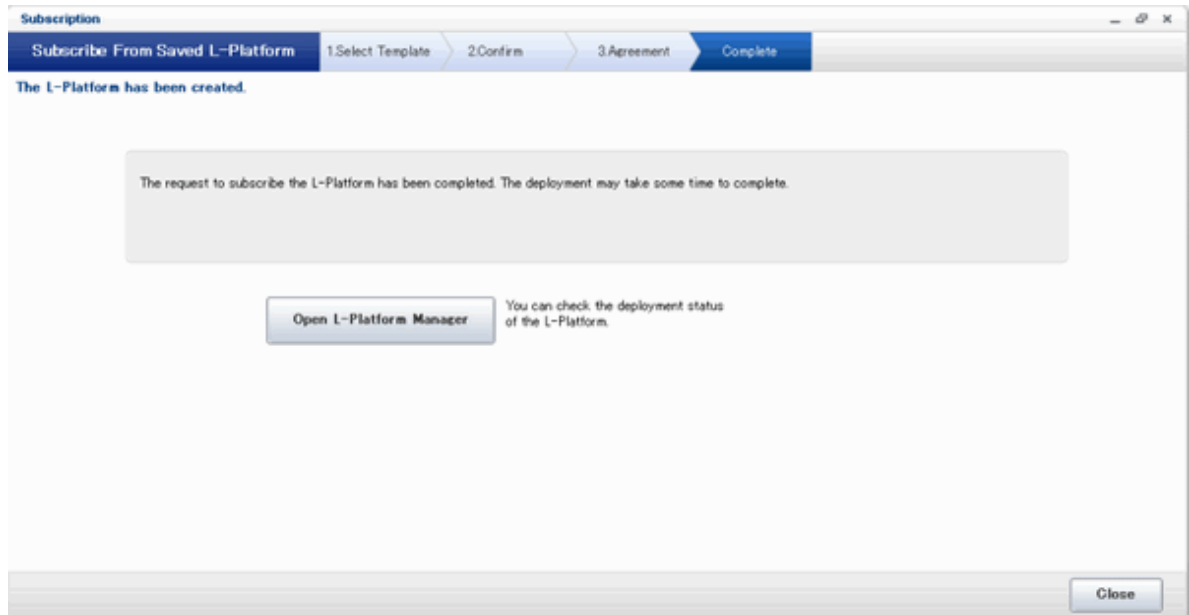
The **Complete** page will be displayed when the subscription to the L-Platform is accepted.

- When the application process is disabled

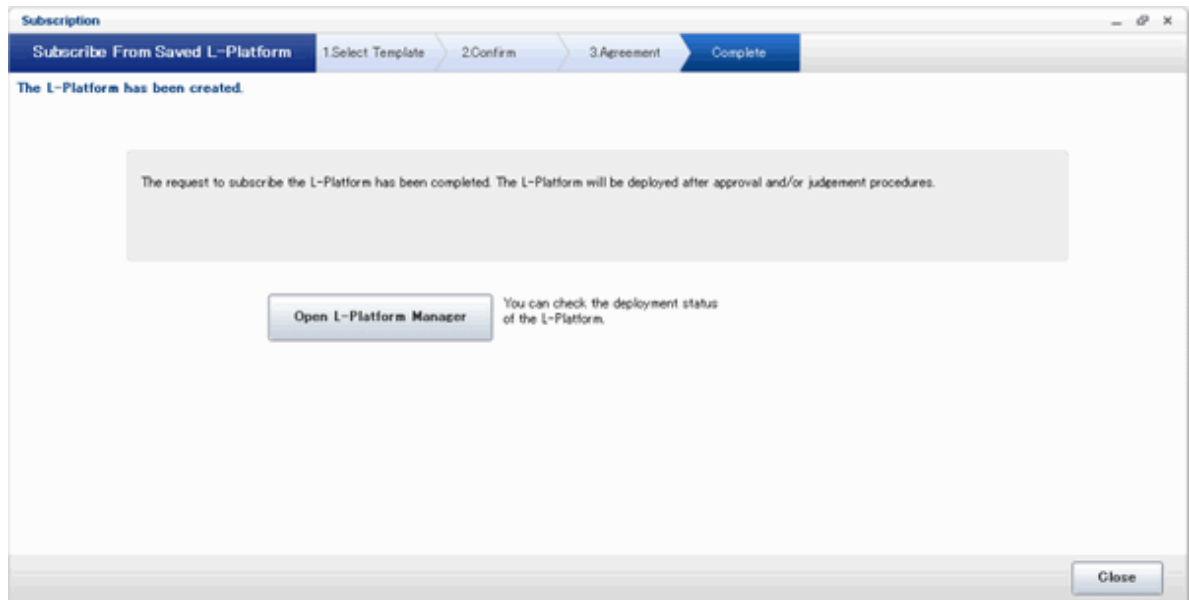The following message will be displayed.
"A request to subscribe the L-Platform has been completed. The deployment may take some time to complete."

- When the application process is enabled

The following message will be displayed.
"The request to subscribe the L-Platform has been completed. The L-Platform will be deployed after approval and/or judgement procedures."

6. Click the **Close** button. The display returns to the **Subscription** page.

Point

When a subscribed L-Platform is deployed, a subscription completion notification email is sent to the subscriber. This email contains the information necessary to access the L-Platform.

If deployment of the subscribed L-Platform fails, a subscription failure notification email is sent to the subscriber and the Infrastructure Administrator. In this case, check with the Infrastructure Administrator, and then subscribe again.

4.3 L-Platform Management

This section explains how to use the **Management** page to manage L-Platforms that are in use.

The L-Platforms targeted by L-Platform management vary in accordance with the user, as follows:

- Infrastructure Administrator

    All L-Platforms.

- Tenant Administrator
  All L-Platforms being used by owned tenants.

- Tenant users
  Only L-Platforms in use by the user.

The **Management** page can be used to display a list of the L-Platforms currently being used.
The following L-Platform operations can also be performed:

- L-Platform detailed information display

- Disk detailed information display

- Server start and stop

- L-Platform reconfiguration

- Taking snapshots of and restoring virtual servers

- Physical server backup and restore

- L-Platform cancellation

4.3.1 L-Platform Management Display Page

This section explains how to display the L-Platform management page and explains the display format.

L-Platform Management Page Display Method

From the operation menu on the **L-Platform** page, select **Management**.

L-Platform Management Page Display Format

The L-Platform management page has the following three types of display format.

| Display format	Description
L-Platform Management	Displays the L-Platform configuration images in a list
L-Platform Management (list)	Displays the L-Platform list
Server List	The list displays virtual servers. It can display all servers or inactive servers.

The buttons in the upper-left section of the page can be used to switch between the "L-Platform Management" and "Server List" display formats.
The display can be switched between the "configuration" format and the "list" format using the button located on the top right hand side of the page ( ).

Examples of each display format are shown below:

- L-Platform Management

Click the **Management** button on the top left hand side of the page and then click the button ([••••]) on the top right hand side of the page to display an L-Platform list in a configuration image.
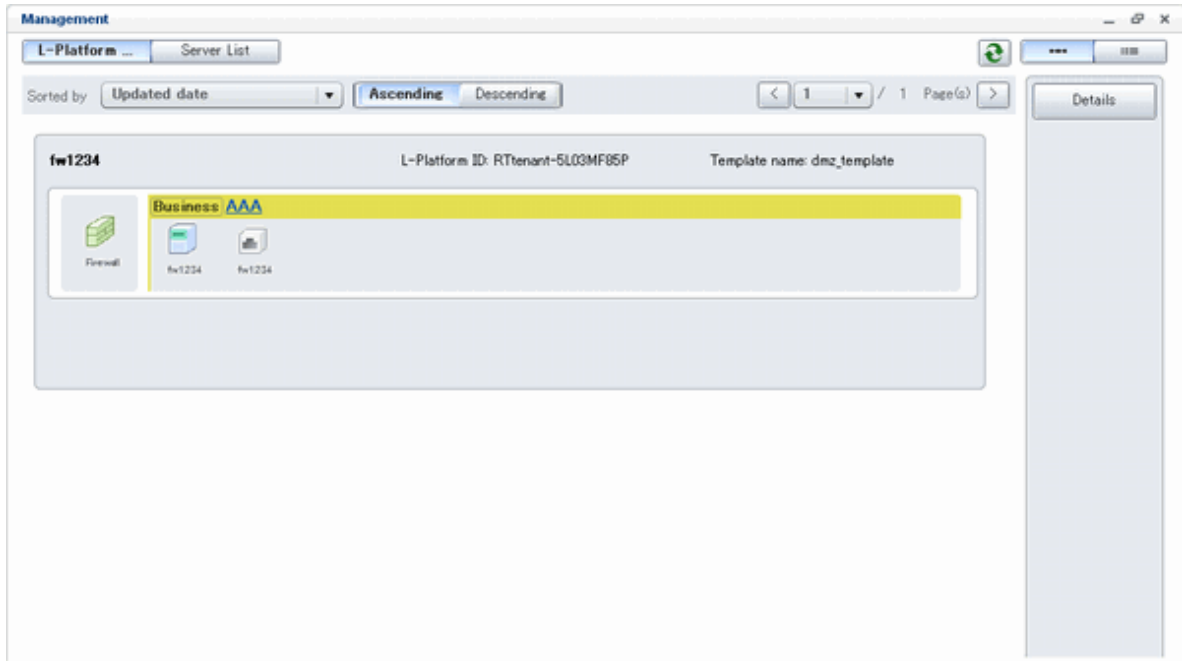
The following information can be checked on the **Management** page:

The following information can be checked using the **Management** page:

  - L-Platform name: The L-Platform name set during L-Platform subscription

  - L-Platform ID: The ID that identifies the L-Platform

  - L-Platform Template name: The name of the L-Platform Template

  - L-Platform configuration: The L-Platform configuration image

The sequence of the L-Platforms displayed can be switched by clicking **Sorted by** followed by the **Ascending order** or **Descending order** button for the following items:

  - Update date

  - L-Platform name

  - L-Platform ID

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Using the **Details** button, details of the L-Platform can be displayed on the **Management** page. Refer to "4.3.2 L-Platform Detailed Information Display" for information on displaying the L-Platform details.
・・・

- L-Platform Management (list)

    Click the **Management** button on the top left hand side of the page and then click the button ([▥]) on the top right hand side of the page to display a list of information on the L-Platforms.
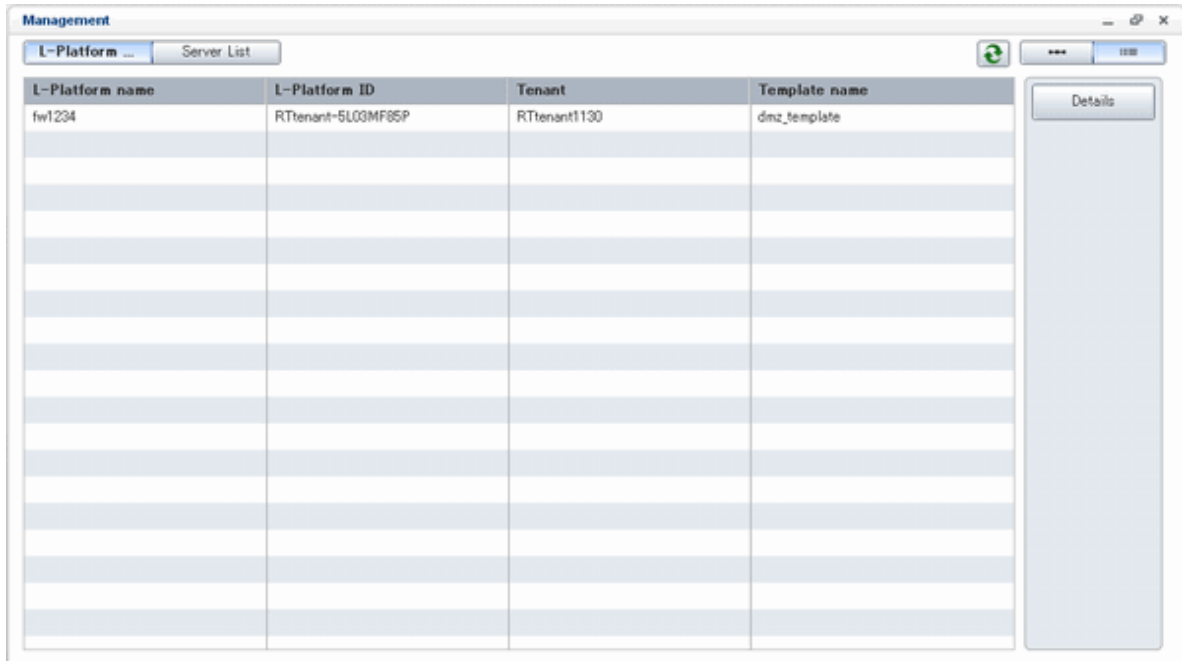
The following information can be checked on the **L-Platform Management (list)** page.

   - L-Platform name: The L-Platform name set during L-Platform subscription

   - L-Platform ID: An ID to identify the L-Platform

   - Organization information: Identification number for the organization

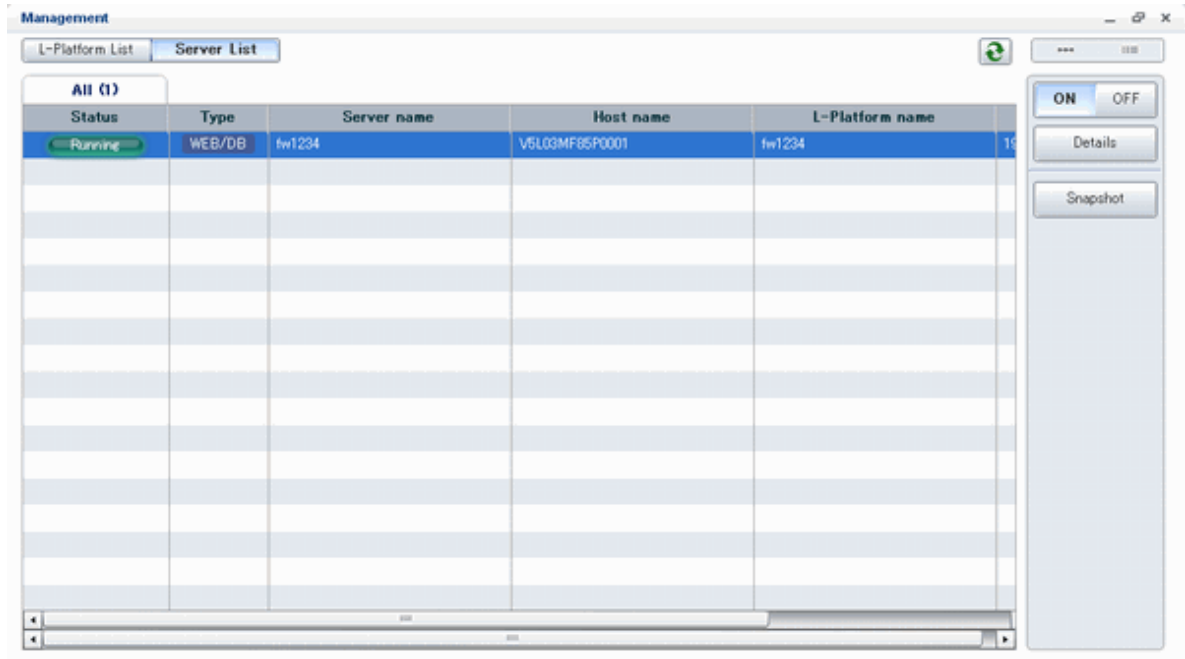   - L-Platform template name: Name of the L-Platform template

The sequence of the L-Platforms displayed can be switched between ascending order and descending order by clicking the column headers (L-Platform name, L-Platform ID, etc).

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Using the **Details** button, details on the L-Platform can be displayed on the **L-Platform Management (list)** page. Refer to "4.3.2 L-Platform Detailed Information Display" for information on displaying the L-Platform details.

. . . .

- Server List

    Click the **Server List** button on the top left hand side of the page to display a list of information on servers included in an L-Platform. The following shows an example of all servers being displayed. To display inactive servers, click the **Stopped** tab.

The following information can be checked on the **Server List** page.

  - Status: Server status (Running, Stopped)

  - Type: Server type

  - Server name: Server name

  - Host name: The server host name. However, this is not displayed for a physical server

  - L-Platform name: The L-Platform name set during L-Platform subscription

  - IP address: IP address of the server

  - Backup/Snapshot: Status of taking and restoring the backup and snapshots

  - Generation: Number of snapshots or backup stored

  - Number of snapshots: Number of snapshots or number of executed backups

The sequence of the servers displayed can be switched between ascending order and descending order by clicking the column headers (status, type, etc).

Point

The following buttons can be used to operate on the **Server List** page.

  - **ON** button: Start the server
    Refer to "4.3.4 Start and Stop the Server" for information on starting the server.

  - **OFF** button: Stop the server
    Refer to "4.3.4 Start and Stop the Server" for information on stopping the server.

  - **Details** button: Display details on an L-Platform or a disk.
    Refer to "4.3.2 L-Platform Detailed Information Display" for information on displaying L-Platform details. Refer to "4.3.3 Display Details on a Disk" for information on displaying details on a disk.

  - **Snapshot** button: Take and restore snapshots Refer to "4.3.6 Take and Restore Snapshot" for information on taking and restoring snapshots.

- **Backup** button: Backup and restore.
   This button is displayed for physical servers.
   Refer to "4.3.7 Physical Server Backup and Restore" for information on backup and restore.

![Note icon] **Note**

The **Running** icon for a server indicates that the power has been turned on.

Even if the **Running** icon is displayed, login to the L-Platform may fail if logged in immediately after deployment or starting the virtual server. In this case, allow a few minutes before trying to log in again.
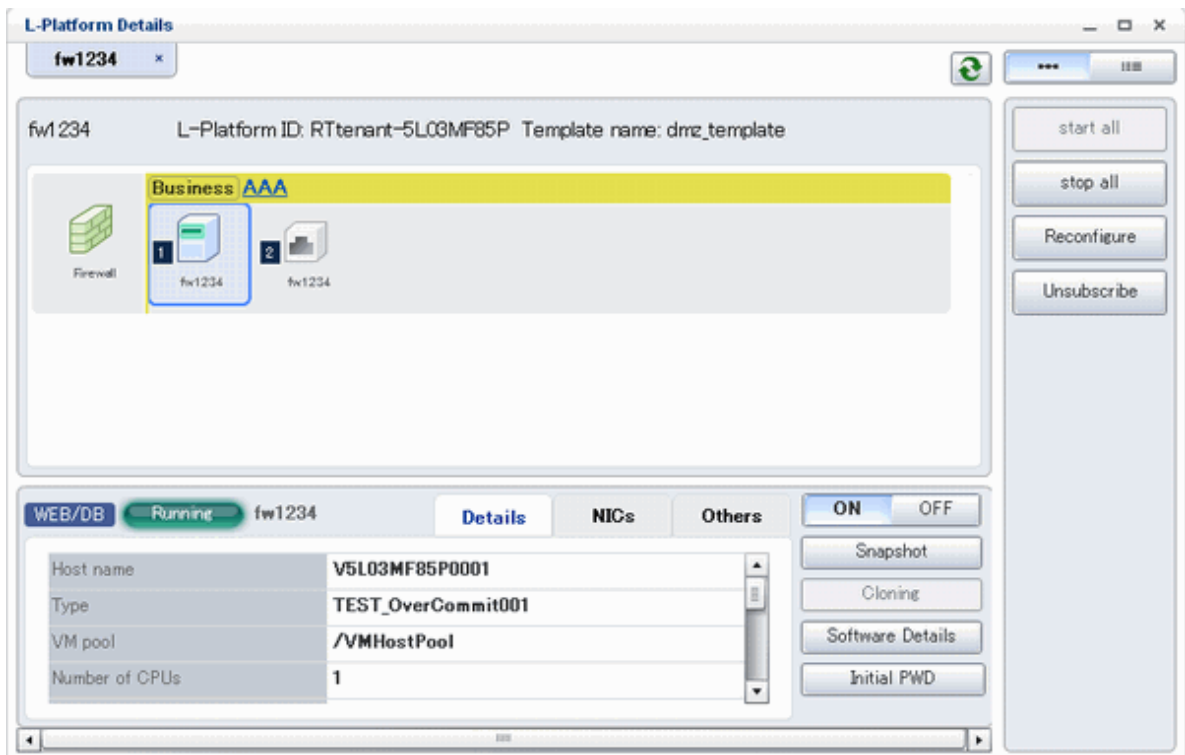
4.3.2 L-Platform Detailed Information Display

Follow the steps below to display the details of L-Platform:

1. Display the **L-Platform Management, L-Platform Management (list)**, or **Server List** page.
   Refer to "4.3.1 L-Platform Management Display Page" for information on how to display the page.

2. Click the **Details** button after selecting the L-Platform or the server required.
   The **L-Platform Details** page will be displayed.

   There are two types of display format for the **L-Platform Details** page below. The display format can be switched using the button
   (![···] ![▦]) located on the top right hand side of the page.

   - L-Platform configuration image

     By clicking the button (![···]) located on the top right hand side of the page, the L-Platform configuration is displayed as an image.

- Server List

  By clicking the button ( ) located on the top right hand side of the page, a list of all virtual servers included in the L-Platform is displayed. The server List also displays the extended disks included in the virtual servers.

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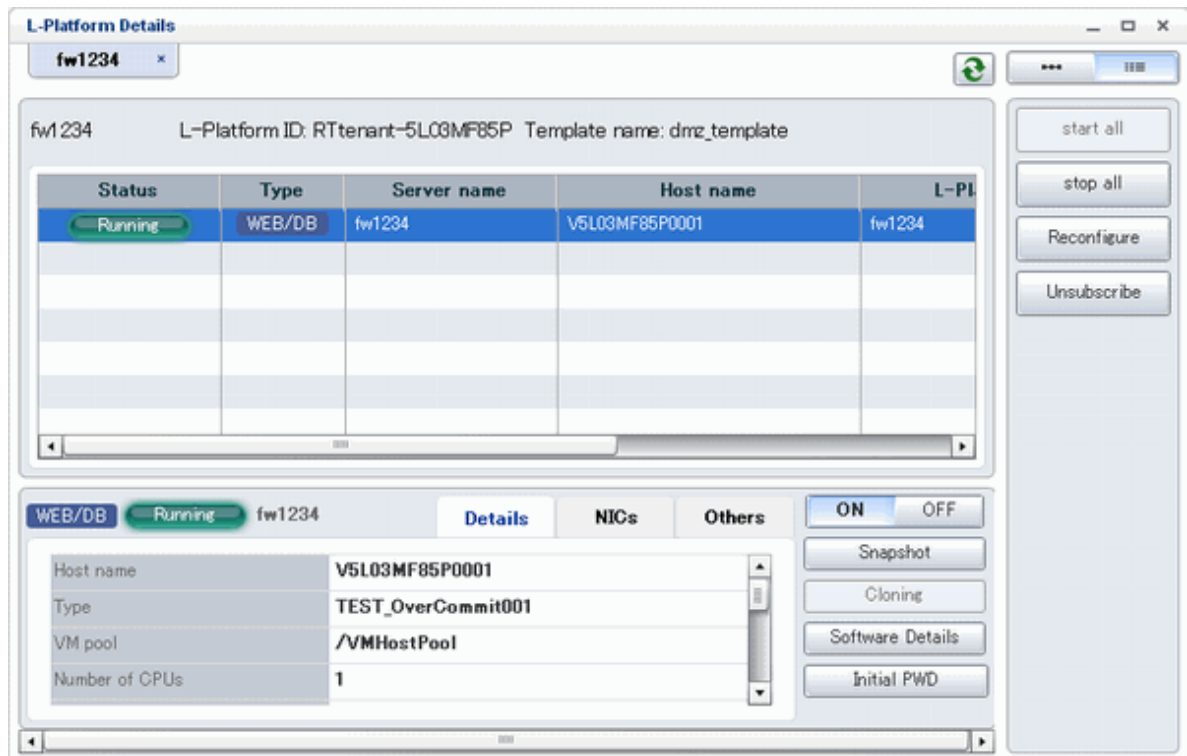
The following buttons can be used on the **L-Platform Details** page:

- **start all** button: Turns the power on for all servers in the L-Platform as a group.

- **stop all** button: Turns the power off for all servers in the L-Platform as a group.

- **Reconfigure** button: Changes the L-Platform Template
  Refer to "4.3.9 L-Platform Reconfiguration" for information on changing L-Platform Templates.

- **Unsubscribe** button: Cancels the L-Platform
  Refer to "4.3.10 Cancel an L-Platform" for information on cancelling L-Platforms.

- **ON** button: Start the server
  Refer to "4.3.4 Start and Stop the Server" for information on starting the server.

- **OFF** button: Stop the server
  Refer to "4.3.4 Start and Stop the Server" for information on stopping the virtual server.

- **Snapshot** button: Take and restore snapshots
  This button is displayed for virtual servers.
  Refer to "4.3.6 Take and Restore Snapshot " for information on taking and restoring snapshots.

- **Backup** button: Backup and restore
  This button is displayed for physical servers.
  Refer to "4.3.7 Physical Server Backup and Restore" for information on backup and restore.

- Setting button:Setup firewall
  This button is displayed for firewall.
  Refer to "4.3.8 Setup Firewall" for information on setup firewall.

- **Software Details** button: Display software information

- **Initial PWD** button: Confirm the initial password
  Depending on the L-Platform settings, the "Initial password" is " ". Sometimes it is displayed as ".
  The initial password is set after L-Platform deployment.

- **Add Patch Information** button: Register the patch information
  Refer to "4.3.5 Manage Patch Information" for information on registering patch information.

- **Delete Patch Information** button: Delete the patch information
  Refer to "4.3.5 Manage Patch Information" for information on deleting the patch information.

![Note icon] **Note**

If 'start all' or 'stop all' button is clicked while another user is reconfiguring the L-Platform, the start or stop operation fails with the error code VSYS10051.

If this error occurs when no user is reconfiguring the L-Platform, perform the following operation before starting or stopping all servers.

1. Click the Reconfigure button on the L-Platform Details page.

2. After the following message is displayed, click the 'Obtain the lock on a mandatory basis' button, and then cancel the reconfiguration.

```
The L-Platform is locked by another user.
After obtaining the lock on a mandatory basis, the operation can be continued.
```

4.3.3 Display Details on a Disk

Follow the steps below to display the details of a disk located on the virtual server:

1. Display the **L-Platform Details** page.
   Refer to "4.3.2 L-Platform Detailed Information Display" for information on how to display the page.

2. After selecting the virtual server to which the disk is added, select **Disk** from the list box.
   The details of the disk will be displayed on the **L-Platform Details** page.

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The following buttons can be used on the **L-Platform Details** page displaying the details of the disk.

- **Reconfigure** button: Modify an L-Platform template
  Refer to "4.3.9 L-Platform Reconfiguration" for information on modifying an L-Platform template.

- **Unsubscribe** button: Cancel an L-Platform
  Refer to "4.3.10 Cancel an L-Platform" for information on canceling an L-Platform.

4.3.4 Start and Stop the Server

Follow the steps below to start or stop a server:

1. Display the **Server List** page.
   Refer to "4.3.1 L-Platform Management Display Page" for information on how to display the page.
   Alternatively, display the **L-Platform Details** page.
   Refer to "4.3.2 L-Platform Detailed Information Display" for information on how to display the page.

2. After selecting a required server, click the **ON** button to start it or the **OFF** button to stop it.

 Note

Even if the server is stopped using the **OFF** button, sometimes the server may not stop, due to a problem with the server. In this case, the **ON** button and **OFF** button act as Forced stop buttons. When a **Forced stop** button is clicked, the server will stop forcibly.

The **Forced stop** button is designed to shut down the power to the server.
Therefore, the recommendations for virtual servers is to use remote desktop connection to connect to the virtual server, and then to shut down the operating system.

4.3.5 Manage Patch Information

Patch information can be managed after it is applied to or deleted from a server that has been deployed.

Register Patch Information

Follow the steps below to register patch information:

1. Display the **L-Platform Details** page.
   Refer to "4.3.2 L-Platform Detailed Information Display" for information on how to display the page.

2. After selecting the required server, select the **Others** tab.
   The following page will be displayed if the patch information has not been registered.
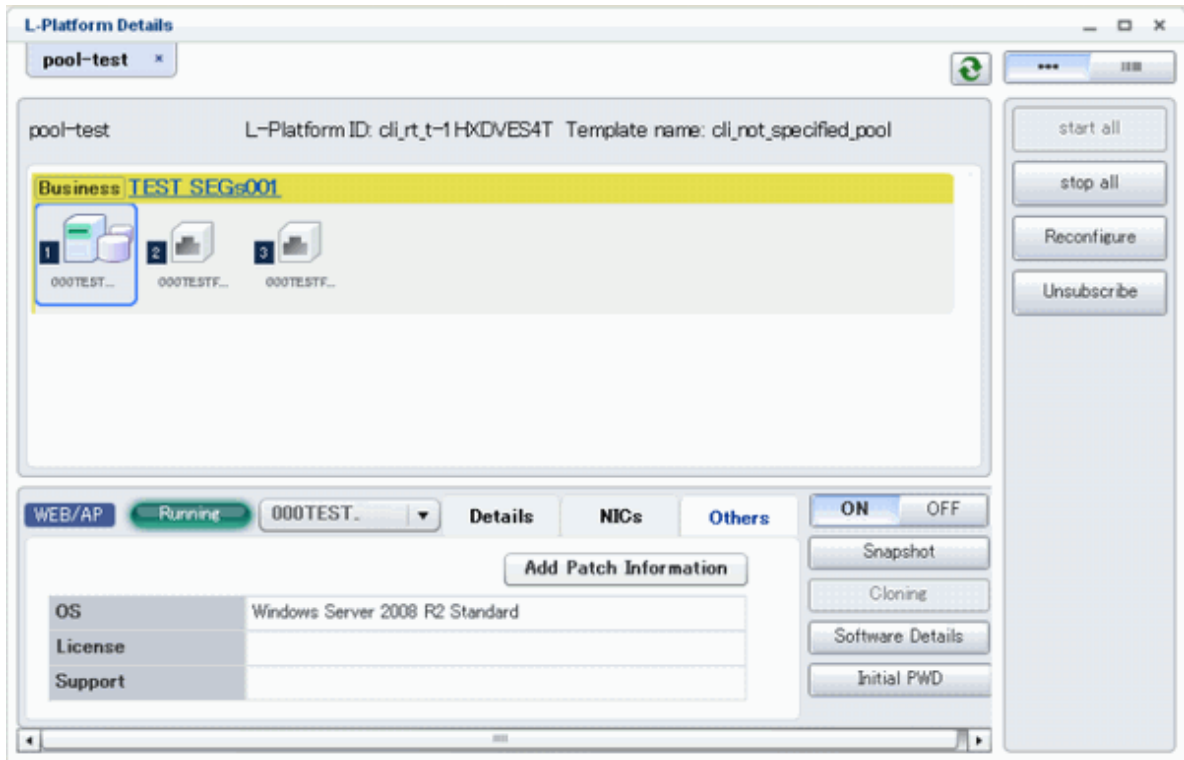
3. Click the **Add Patch Information** button.
   The **Add Patch Information** page will be displayed.
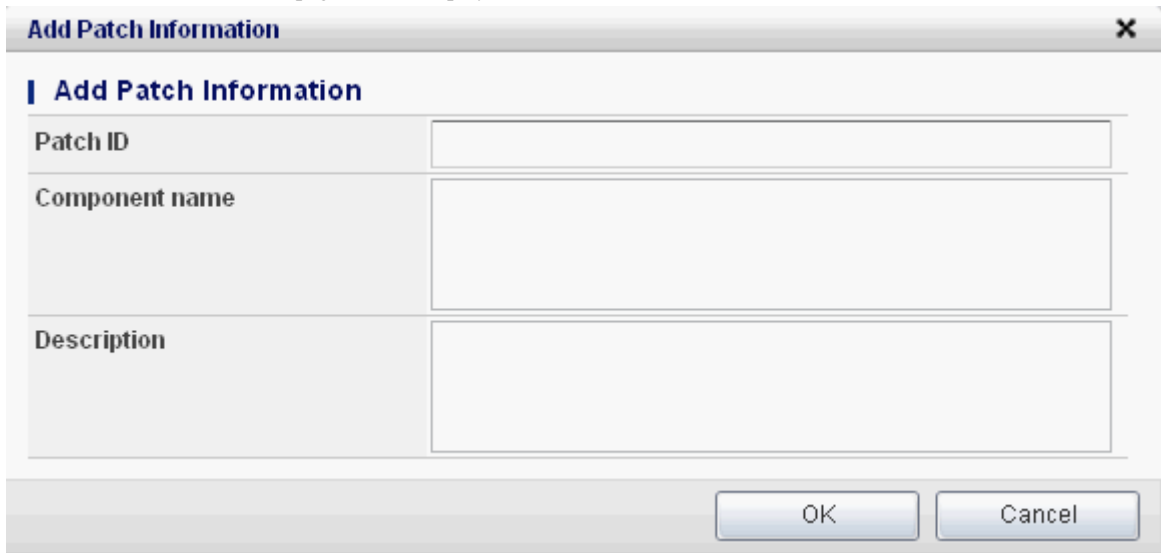
Item	Description
Patch ID	Specify the patch ID that has been applied. The patch ID must be no more than 32 bytes of alpha-numeric one-byte characters.
Component name	Specify the name of the component where the patch is to be applied. The name must be no more than 85 characters long and not include the following characters: `<, >, &, ', " and control characters`

Item	Description
Description	Specify the description related to the patch information that has been applied. The description must be no more than 85 characters long and not include the following characters: `<, >, &, ', " and control characters`

4. Enter the required fields and click the **OK** button.

Delete Patch Information

Follow the steps below to delete patch information that has been registered:

1. After selecting the required server on the **L-Platform Details** page, select the **Others** tab.
   The following page will be displayed if the patch information has been registered.
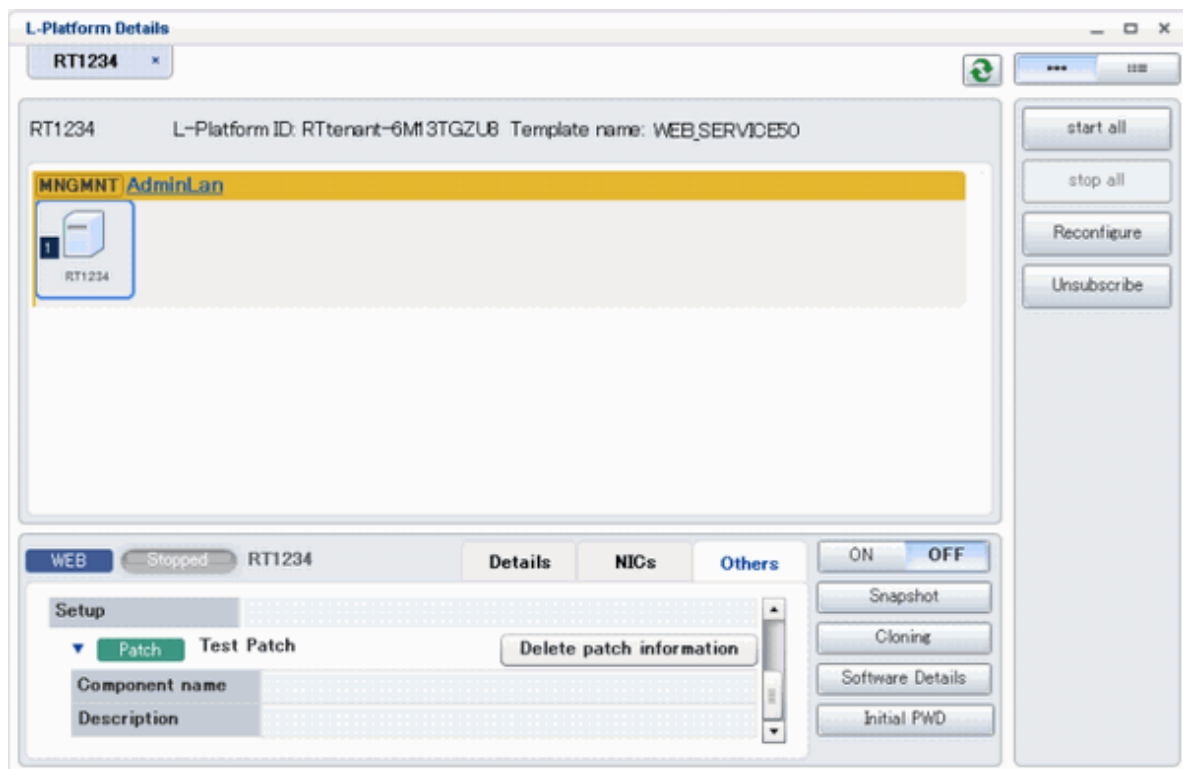

2. Click the **Delete patch information** button of the patch information to be deleted.
   A message confirming the deletion will be displayed. Click the **OK** button.

4.3.6 Take and Restore Snapshot

Using the **Snapshot** page, snapshots can be taken and restored for the virtual server.

To take the snapshots and restore them, the target virtual server must be inactive.
Snapshot is managed by the generation. Snapshots of older generations will be deleted if snapshots that are older than three generations are to be taken.
Contact the system administrator if it is necessary to take snapshots over 4 or more generations.

🛑 **Note**

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- The function for taking and restoring snapshots is supported if the virtualization software is either VMware or Hyper-V. If the virtualization software is RHEL5-Xen or RHEL-KVM, there is no function for taking and restoring snapshots.

- The server will enter an error state if an error occurs while taking or restoring snapshots.
  When this occurs, a character string "Error" and **x** button will be displayed on the **Snapshot** column of the relevant row on the **Server List** page. To clear the error state, click the **X** button.

- The backup products that support the virtual server backup operations located on the virtualization software must be used to back up the virtual server to a disk or tape device that is not the disk device the virtual server is running on.

- When the configuration is modified after taking the snapshots and those snapshots are restored, the server may be restored to the state before the configuration was modified. It is recommended that new snapshots be taken after the configuration is modified.

- Even if a created snapshot is not deleted, contact the System Administrator if it is not displayed in the Snapshort window.

· ·

Take Snapshots

Follow the steps below to take snapshots:

1. Display the **Server List** page.
   Refer to "4.3.1 L-Platform Management Display Page" for information on how to display the page.
   Alternatively, display the **L-Platform Details** page.
   Refer to "4.3.2 L-Platform Detailed Information Display" for information on how to display the page.

2. After selecting a required server, click the **Snapshot** button.
   The **Snapshot** page will be displayed.

3. Click the Start to **Take Snapshot** button.

4. A pop-up window will be displayed. Enter a comment of less than 128 characters.
This will display the comment entered on the snapshot list.

5. Click the **Take Snapshot** button to start taking the snapshot.

Restore Snapshots

Follow the steps below to restore the taken snapshots:

1. Select the required snapshot from the snapshot list on the **Snapshot** page.

2. When the **Restore** button is clicked, the restore processing of the snapshot will start.

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To delete the snapshots taken, select the snapshot to be deleted from the snapshot list, and click the **Delete** button.
. . . .

Note
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Only the operation of taking of the snapshot and restoring is displayed in the history on the **Snapshot** page.
. . . .

4.3.7 Physical Server Backup and Restore

The Backup page can be used to back up and restore a physical server.

The target physical server must be stopped before performing backup and restore.
Backup is managed by the generation. Backups of older generations will be deleted if snapshots that are older than three generations are to be taken.
Contact the system administrator if it is necessary to take backups over 4 or more generations.

Note
. . . .
- If an error occurs during backup or restore processing, an error state occurs for the server.
At this time, the character string "Error" and an **X** button are displayed in the Backup column of the relevant row of the **Server List** page. The error status can be cancelled by clicking this **X** button.

- If a server is reconfigured after backup, when the server is restored it may revert to the configuration prior to the reconfiguration. It is recommended to make a new backup after reconfiguration.
. . . .
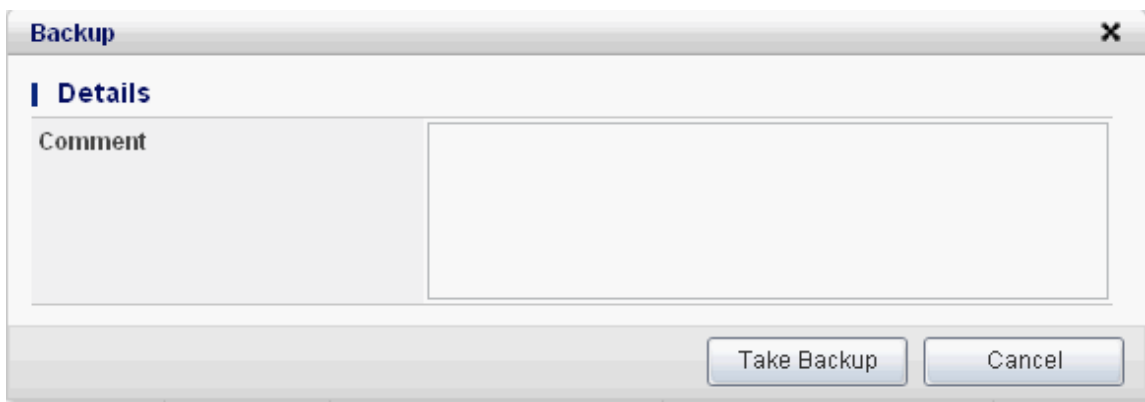
Backup

Follow the steps below to backup:

1. Display the **Server List** page.
   Refer to "4.3.1 L-Platform Management Display Page" for information on how to display the page.
   Alternatively, display the **L-Platform Details** page.
   Refer to "4.3.2 L-Platform Detailed Information Display" for information on how to display the page.

2. After selecting a required server, click the **Backup** button,
   The **Backup** page will be displayed.
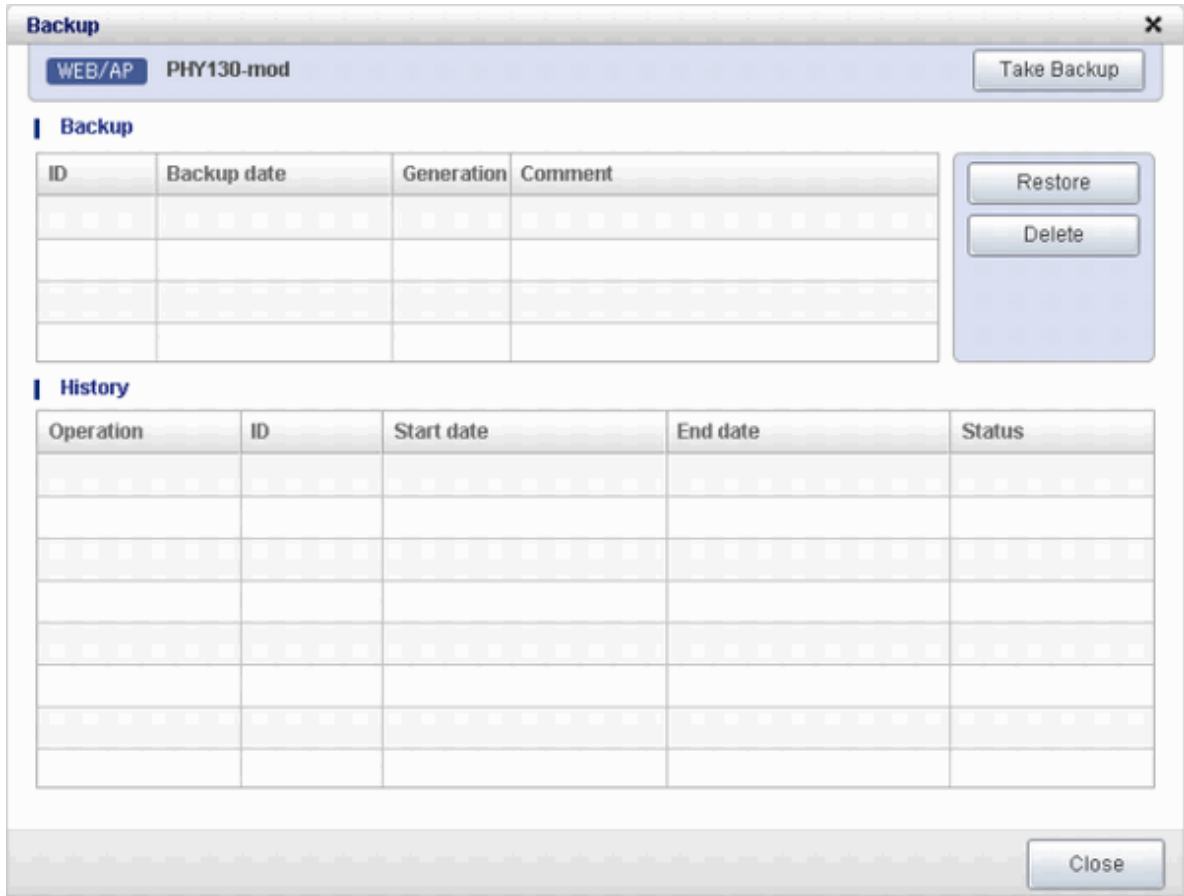
3. Click the **Take Backup** button.

4. A pop-up window will be displayed. Enter a comment of less than 128 characters.
   This will display the comment entered on the backup list.

5. Click the **Take Backup** button to start backup.

Restore

Perform the following operations to restore a backed up server:

1. In the backup list in the Backup page, select the target backup.

2. Click the **Restore** button to start the restore.

4.3.8 Setup Firewall

Change the firewall settings.

The firewall rule set parameter values can be changed in the firewall settings.

Perform the following steps to change the firewall settings:

1. Display the **L-Platform Details** page

    Refer to "4.3.2 L-Platform Detailed Information Display" for the display method.

2. Select the firewall, and then click the **Setting** button.

3. A pop-up window is displayed.

    - Label: Displays the parameter label

    - Description: Displays an explanation of the parameter

    - Value: Enter the value to be set for the parameter

4. When the **Update** button is clicked, a confirmation message is displayed.
   Click the **OK** button to save and apply the firewall settings.

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Firewall settings cannot be set by L-Platform subscription or L-Platform reconfiguration.

After an L-Platform is deployed, check the IP addresses of the servers included in the L-Platform and the port numbers used by the installed middleware. Then, set the allowed IP addresses and port numbers in the relevant rule set parameters in the firewall settings.

4.3.9 L-Platform Reconfiguration

The system configuration that configures the L-Platform in use can be modified on the **Reconfigure** page.
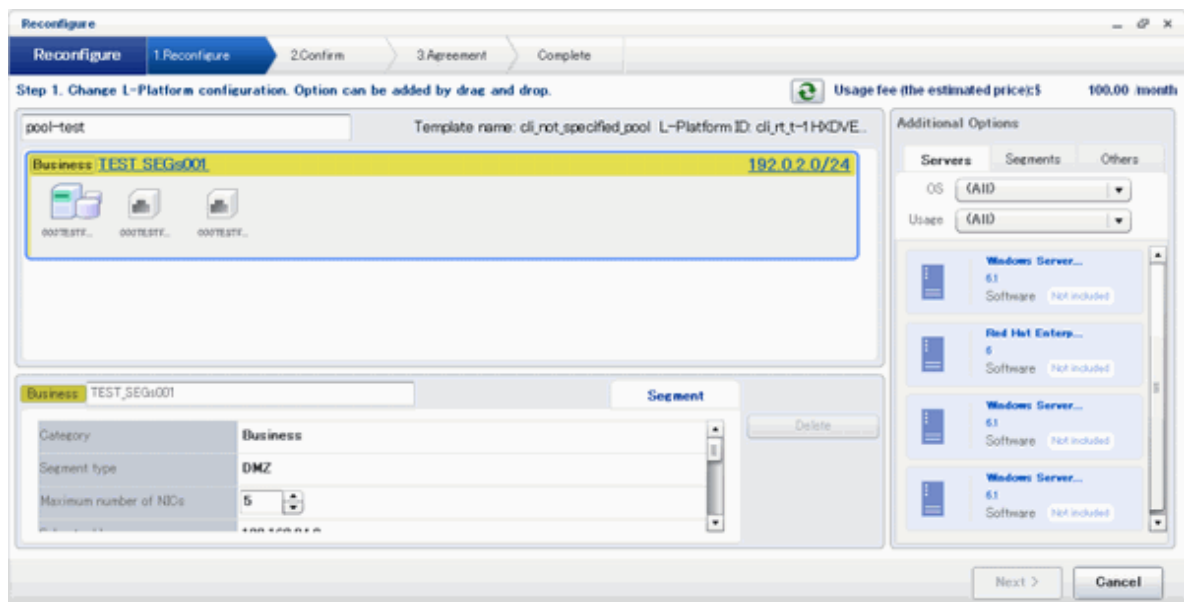
📖 Note

- The **Reconfigure** page can be used only if the Infrastructure Administrator is permitted to change the L-Platform Template.

- Before changing the L-Platform, stop the server. If the virtual server is running when you try to change it, an error will occur. However, the following operations are executable even if the virtual server is running.

    - Change the system name

    - Change the server name

    - Change the disk name

    - Add a server

    - Add a disk

    - Change CPU performance (*) (virtual servers only)

        *: This operation can only be executed with RHEL5-Xen.

    - Setting the startup priority level

- Regardless of whether or not an L-Platform reconfiguration completion notification email is received, check with the Infrastructure Administrator if an L-Platform Template is not changed. In this case, the change processing may have failed at the virtual server.

Follow the steps below to modify the system configuration that configures the L-Platform in use:

1. Display the **L-Platform Details** page.
   Refer to "4.3.2 L-Platform Detailed Information Display" for information on how to display the page.

2. Click the **Reconfigure** button and display the **Reconfigure** page.

3. Modify the system configuration as required on the **Reconfigure** page.

   Estimated charges corresponding to the system reconfiguration will be displayed in the top-right of the window.

The following items cannot be modified when a system that has been deployed.

- VM pool

- System disk

- Subnet

- NIC extension and reduction (virtual servers only)

Refer to "4.3.11 Reconfiguration Page " for information on the other items.

Note

For both system disks and extended disks that have been deployed, neither the size nor the pool can be modified. Extended disks that have been deployed can be deleted.

Point

Estimated fees for the L-Platform template will only be displayed when the charges display is set to enabled.
The displayed estimated charges will be calculated according to current prices, and not according to prices at the time of deployment.

4. When the L-Platform is modified, click the **Next** button.
   The **Confirm** page will be displayed.
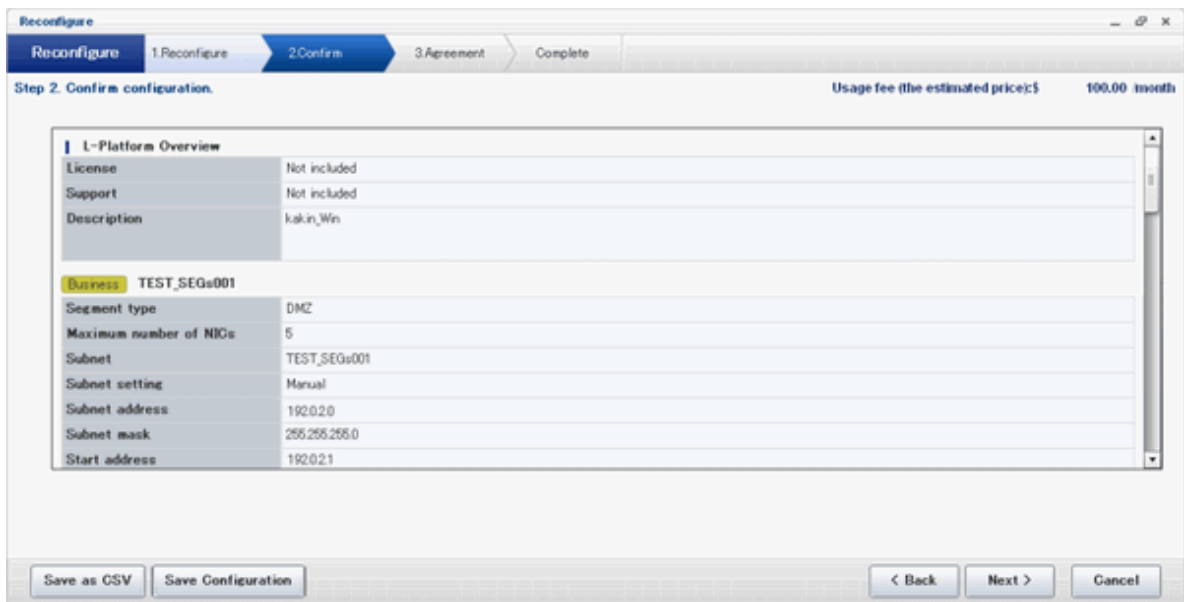
The difference between the old L-Platform template and the new L-Platform template is displayed as follows:

Item	Display format
Item changed	The values of the changed items are displayed in red. The old value is displayed as "Changed from *the old value*".
Item added	"*Added" is displayed after items that have been added. The values of the added items are displayed in red. The background of the added item is displayed in red.
Item deleted	"*Deleted" is displayed after items that have been deleted. The background of the deleted item is displayed in gray.

CSV output

When the **Save as CSV** button is clicked, the **Select the destination to save** window is displayed where the L-Platform template can be saved as a CSV file.
The CSV file name is in the following format:

```
SystemConfiguration (+ <L-Platform name> +)_ <date> + .csv
```

Save specification

Click the **Save Configuration** button to save the L-Platform template, and the display returns to the **Management** page.

When the L-Platform template is saved, an icon ([icon]) will be displayed after the L-Platform template name.

5. Check the displayed contents of the L-Platform template, and click the **Next** button.
   The **Agreement** page will be displayed.
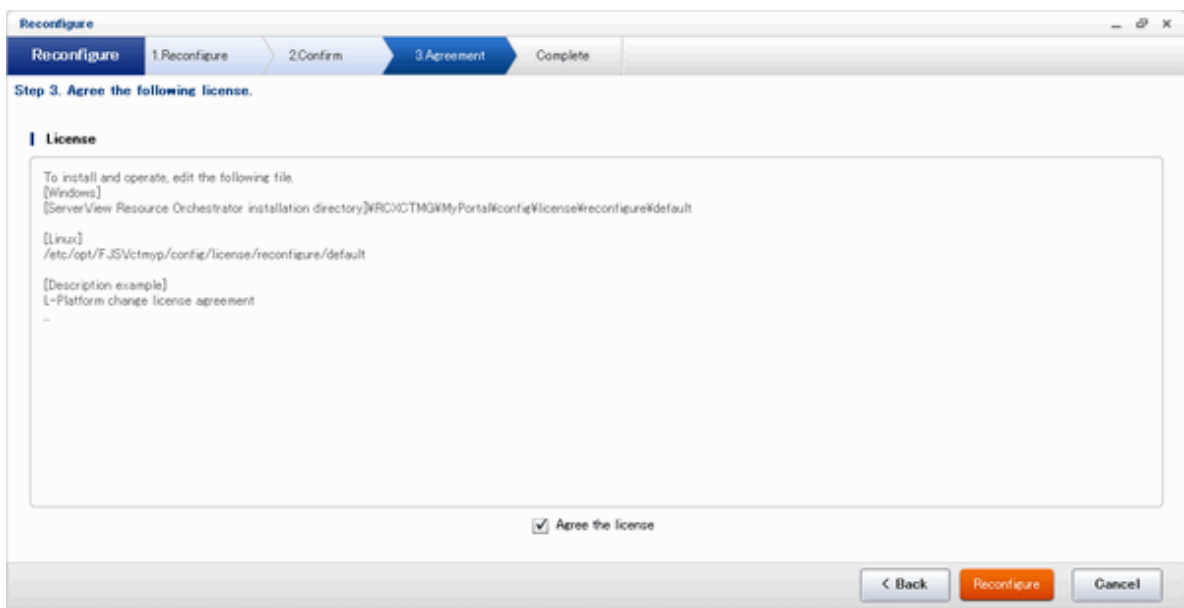
6. Check the license agreement displayed. Select the **Agree the license** check box, and then, click the **Reconfigure** button.
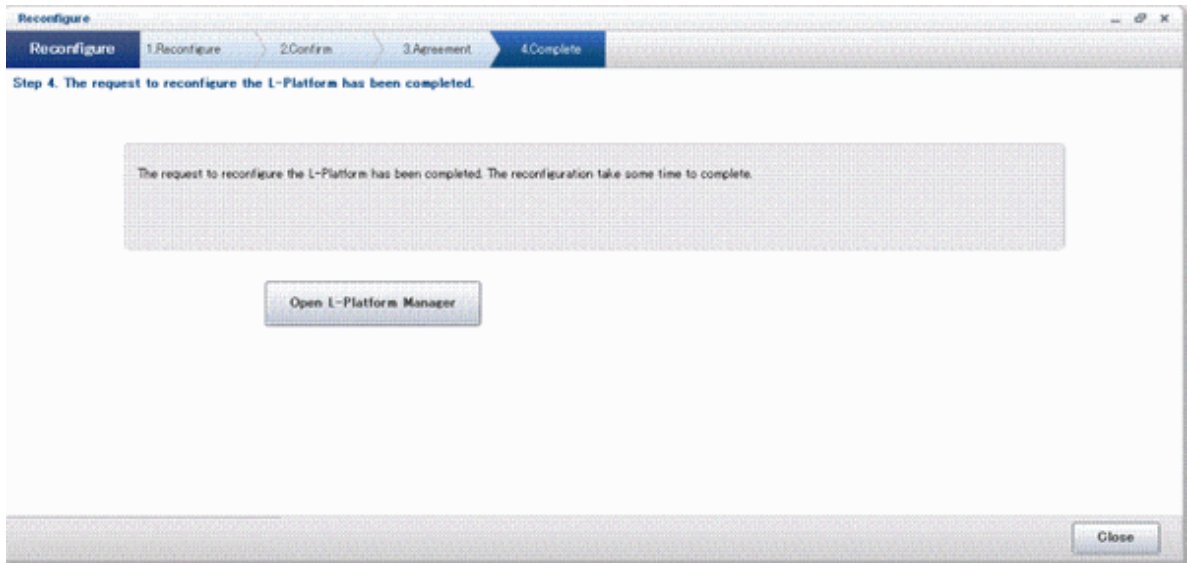
When the application process is enabled, clicking of the **Reconfigure** button on the **Agreement** page displays the **Forward screen** window. Refer to "4.5 Select Forward Destination of Application Process" for details.

The **Complete** page will be displayed when an application for modification of an L-Platform template is accepted.

- When the application process is disabled

  The following message will be displayed:
  "The request to reconfigure the L-Platform has been completed. The reconfiguration take some time to complete."

- When the application process is enabled

  The following message will be displayed:
  "The request to reconfigure the L-Platform has been completed. The L-Platform will be reconfigured after approval and/or judgement procedures."
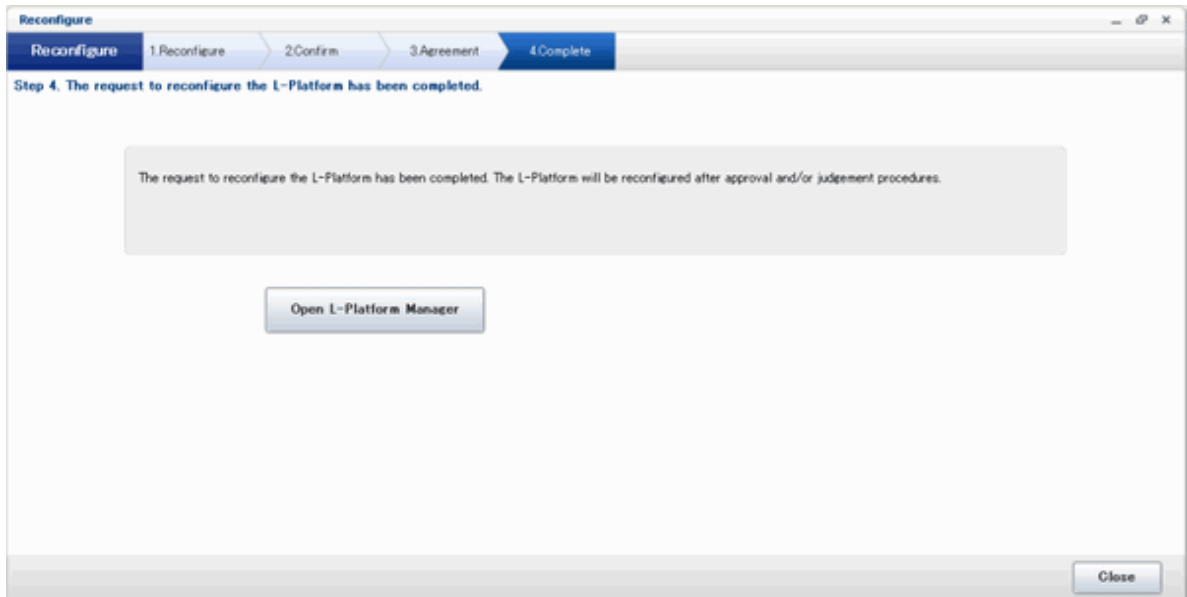
📘 Point

When an L-Platform Template is changed, an L-Platform reconfiguration completion notification email is sent to the subscriber.

If an L-Platform Template change fails, an L-Platform reconfiguration failure notification email is sent to the subscriber and the Infrastructure Administrator. In this case, check with the Infrastructure Administrator about the action required.

4.3.10 Cancel an L-Platform

Follow the steps below to cancel an L-Platform:

1. Display the **L-Platform Details** page.
   Refer to "4.3.2 L-Platform Detailed Information Display" for information on how to display the page.

2. Stop all the servers of the system that configures the L-Platform to be canceled.
   Refer to "4.3.4 Start and Stop the Server" on information on how to stop a server.

3. Click the **Unsubscribe** button.
   The **Confirm** page will be displayed.
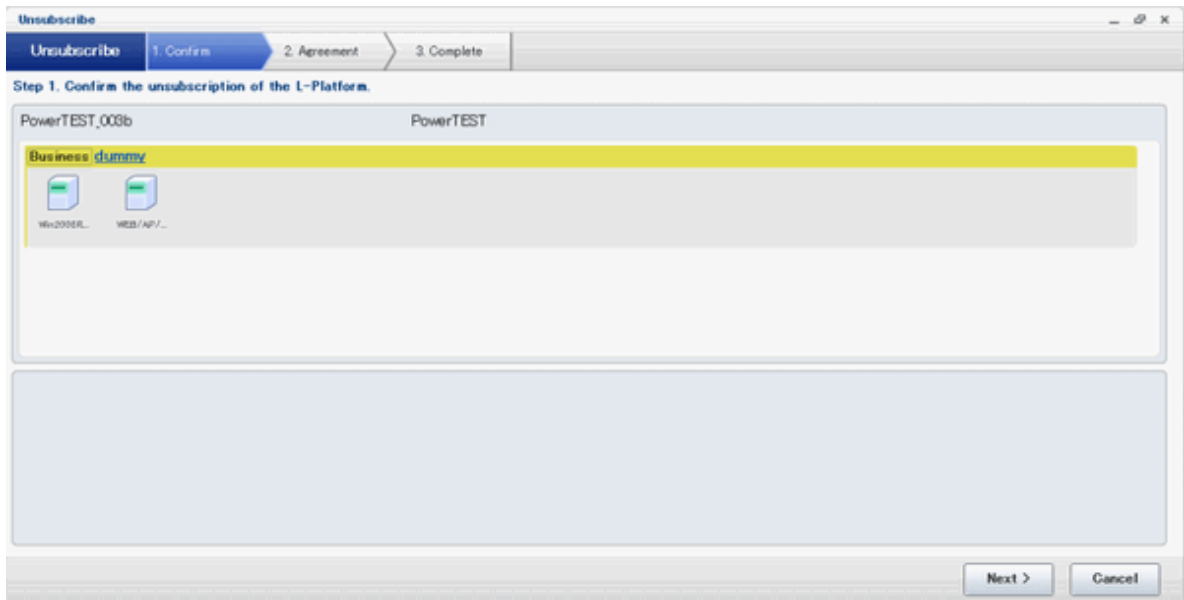
4. Confirm that the correct L-Platform is being canceled, and click the **Next** button.
   The **Agreement** page will be displayed.
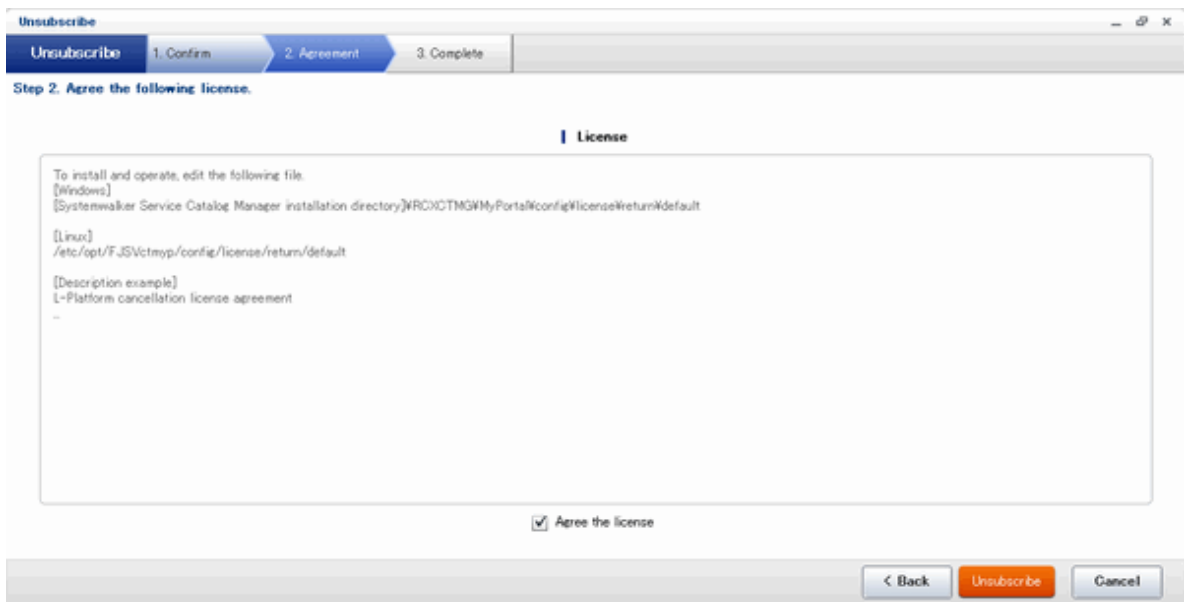
5. Select the **Agree the license** check box to cancel the subscription, and click the **Unsubscribe** button.

   ![P] Point
   . . . .
   When the application process is enabled, clicking of the **Unsubscribe** button on the **Unsubscribe** page displays the **Forward screen** window. Refer to "4.5 Select Forward Destination of Application Process " for details.
   . . . .

The **Complete** page will be displayed when the L-Platform is canceled.

- When the application process is disabled

  The following message will be displayed.
  "The L-Platform has been unsubscribed."
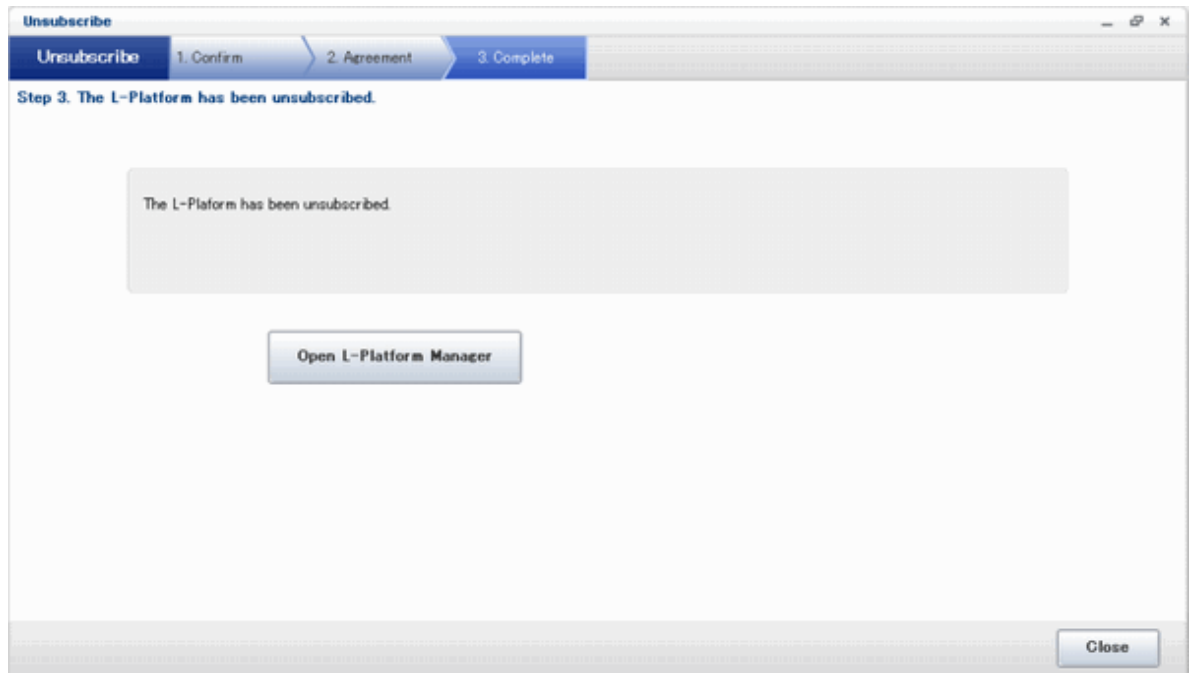
- When the application process is enabled

  The following message will be displayed.
  "The L-Platform to unsubscribe the L-Platform has been completed. The L-Platform will undeployed after approval and/or judgement procedures."

![Note]

When the following events occur, cancellation application may become impossible.

Notify the Infrastructure Administrator of the content displayed on the window.

- The pop-up blocker has been enabled and the 'Forward screen' window is not displayed.

- An error message is displayed on the 'Forward screen' window.
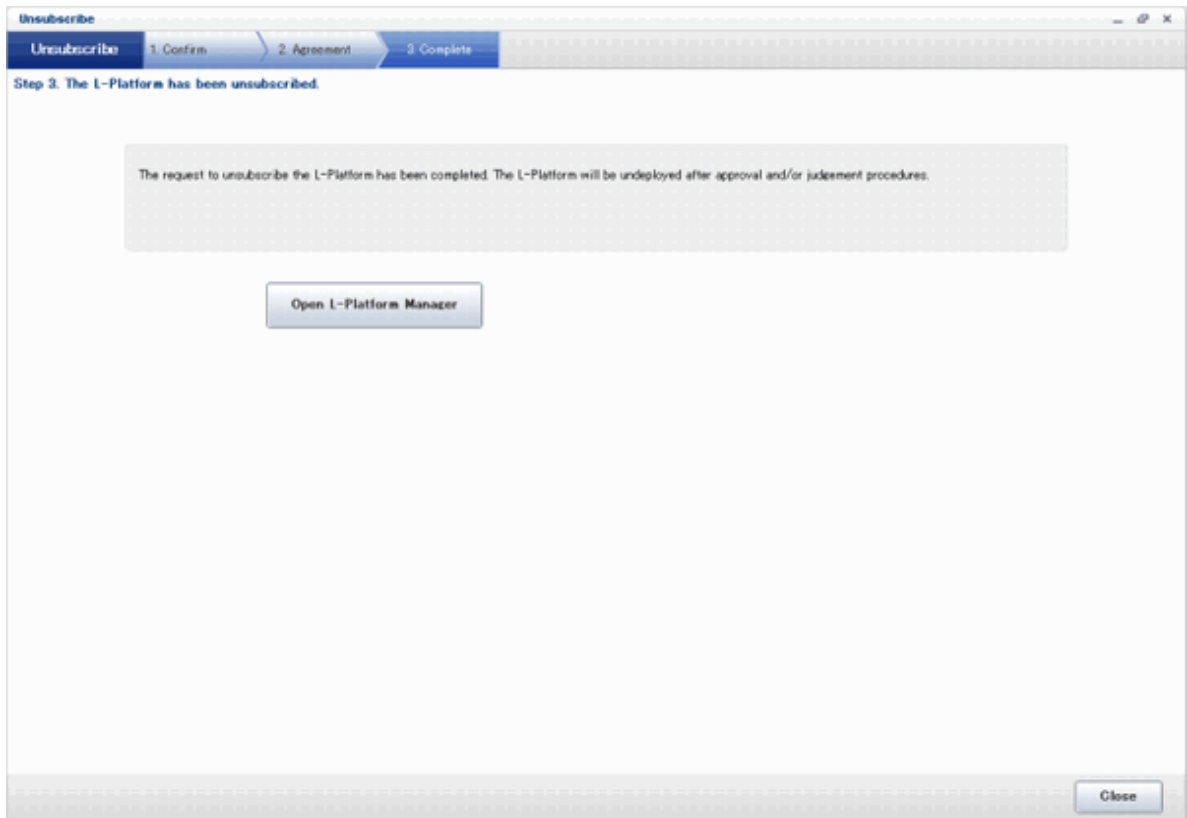
Point

When an L-Platform is cancelled, a cancellation completion notification email is sent to the subscriber.

If an L-Platform cancellation fails, a cancellation failure notification email is sent to the subscriber and the Infrastructure Administrator. In this case, check with the Infrastructure Administrator about the action required.

4.3.11 Reconfiguration Page

The following configuration can be defined on the **Reconfigure** page.

- Segment: Represents a network segment located on the L-Platform

- Virtual server: Represents a server on the L-Platform

- Physical server: Represents a physical server.

- Disk: Represents an extended disk that is not a system disk but can be added to the virtual server or physical server.

An example of the **Reconfigure** page display is shown below.
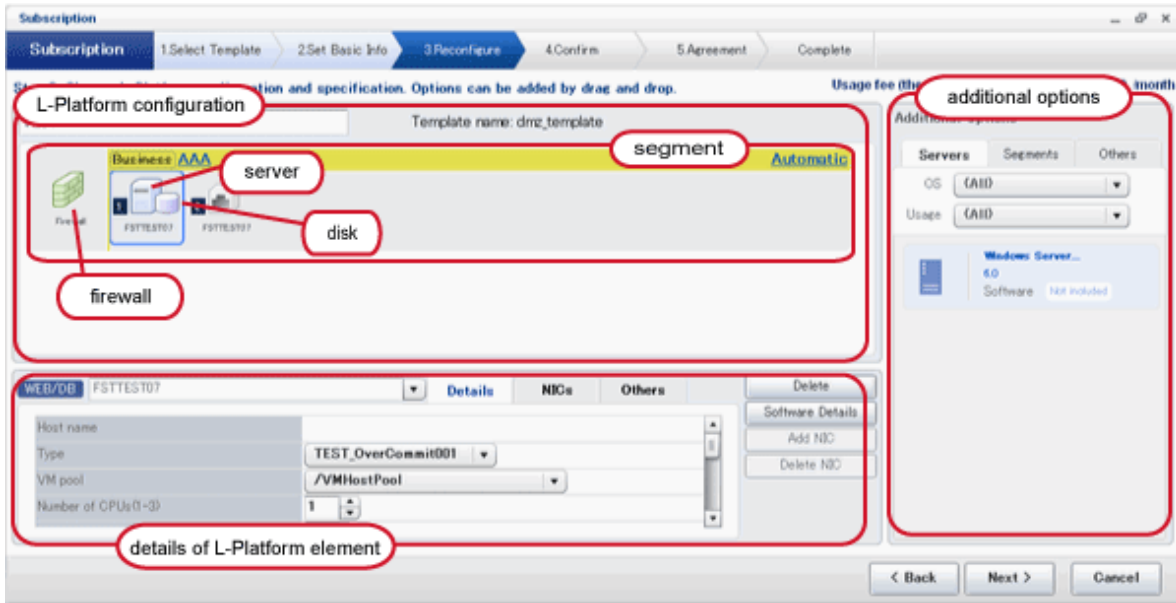
The configuration of the **Reconfigure** page is shown below:

Part	Description
L-Platform configuration	Located on the top of the page, this area expresses the L-Platform in terms of the elements of firewall, segment, virtual server, physical server and disk. When an element is selected, the element is displayed in the Details of configuration element.
Add options	Located on the right hand side of the page, this area lists the elements of, the virtual server, physical server and disk that can be added to the L-Platform The listed elements can be dragged and dropped into the L-Platform using a mouse and added to the virtual system configuration as elements.
Details of L-Platform element	Located at the bottom of the page, this area allows the details of a selected L-Platform element to be edited By clicking the **Delete** button, the elements such as a virtual server or physical server or a disk can be deleted from the L-Platform. Software information can be checked in a new window by clicking the **Software details** button. Click the **Add NIC** button to add NICs. The **Add NIC** button is enabled only if NICs can be added. Click the **Delete NIC** button to delete selected NICs.

P Point

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Estimated fees for the L-Platform template will only be displayed when the charges display is set to enabled. The displayed estimated fees will be calculated according to current prices each time the specs are changed.

. . . .

Edit the L-Platform

The L-Platform can be edited on the **Reconfigure** page.

The L-Platform name entered on the **Basic info** page can be modified.

Only the segments described in the L-Platform template specification are available. They cannot be added or deleted.

To add a virtual server or physical server, a virtual server or physical server listed in **Servers** tab of **Additional options** can be dragged and dropped into the segments.

To add a disk, a disk listed in **Others** tab of **Additional options** can be dragged and dropped into the virtual server or physical server.

The types of disks that can be added are new disks and existing disks. New disks can be added to virtual servers and physical servers. Existing disks are displayed if an Infrastructure Administrator has registered them to a storage pool that can reference already created disk resources, and can be added to physical servers.

Firewall

When the firewall is selected, its rule set can be checked. The firewall cannot be deleted.

The **Reconfigure** page example below shows the page when the firewall is clicked. The window below is the Subscribe L-Platform **Reconfigure** page.
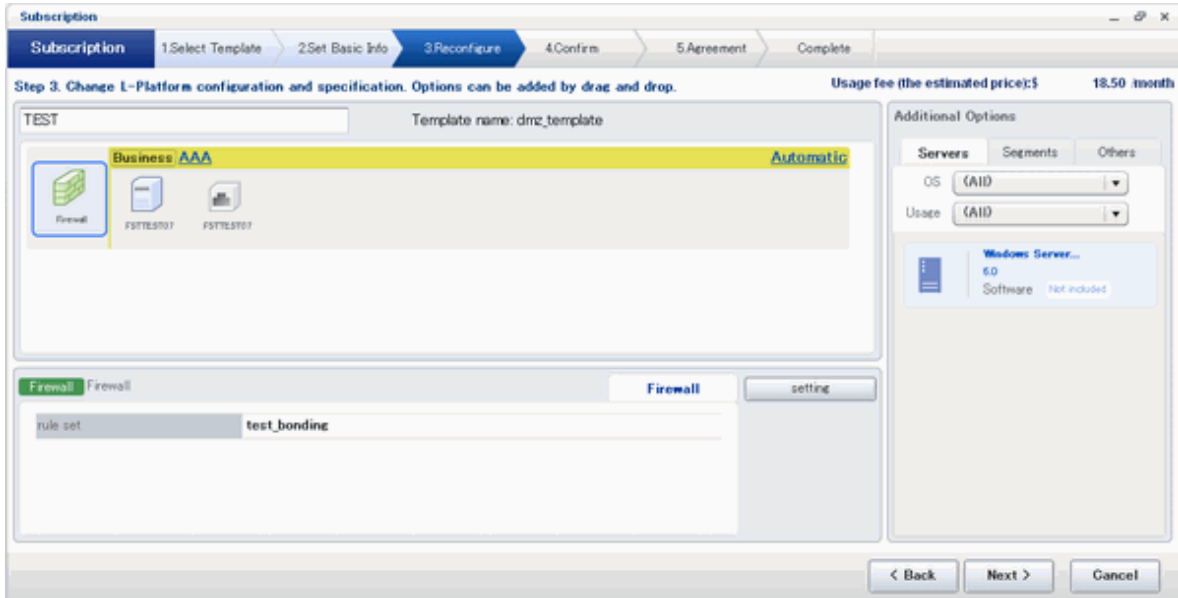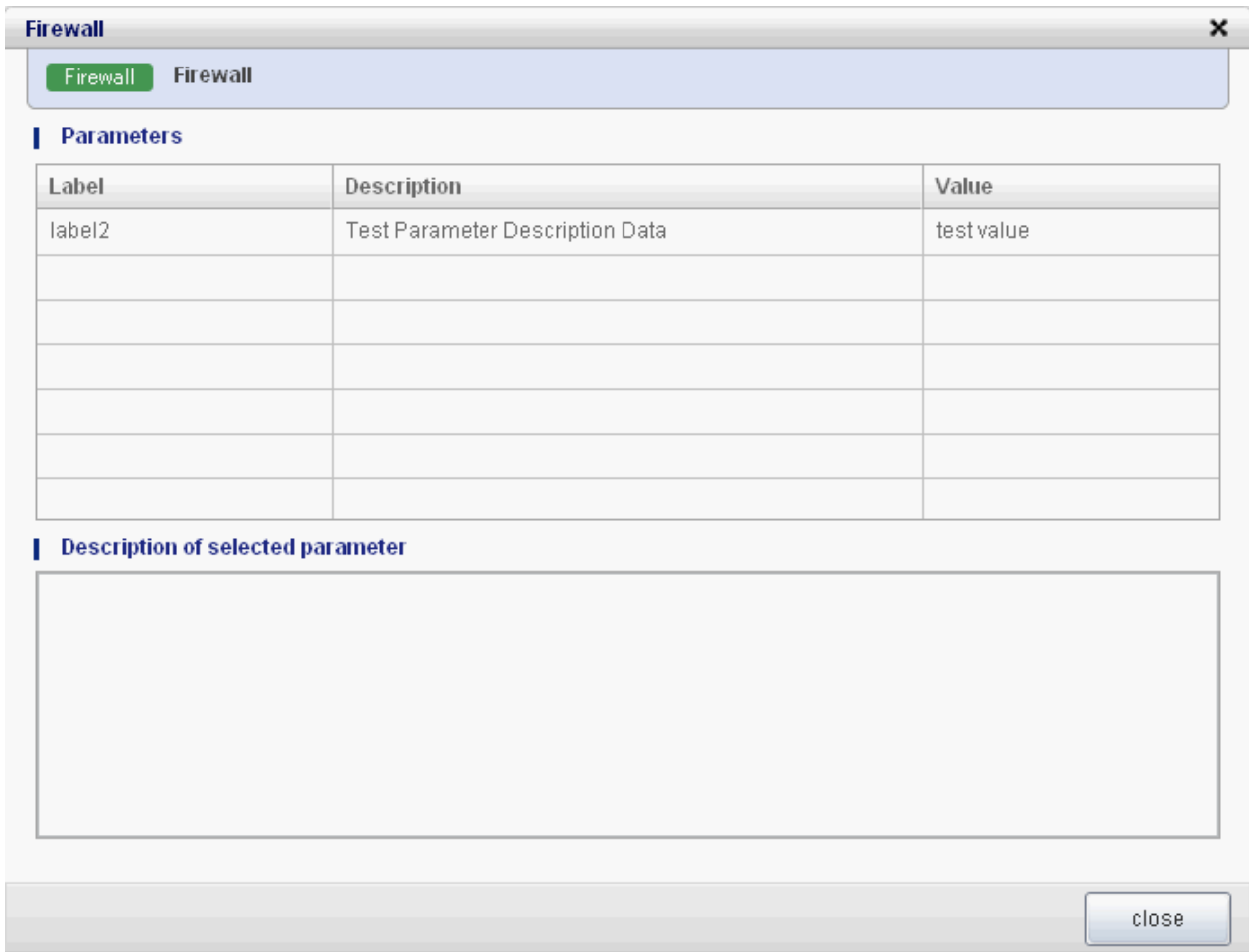

Firewall tab

Part	Description
rule set	Displays the name of the 'rule set' set for the firewall. The rule set name cannot be changed.

Click **Setting** button to check the parameter values in the rule set. The values set as the default are the values specified in the L-Platform template.

The window below is the rule set confirmation window.

Firewall

Firewall Firewall

Parameters

Label	Description	Value
label2	Test Parameter Description Data	test value

Description of selected parameter

close

> **Note**
>
> ....
>
> - The firewall for a server added by a new L-Platform subscription or L-Platform reconfiguration is set after the L-Platform is deployed.
>   Refer to "4.3.8 Setup Firewall" for details.
>
> ....

Edit a Segment

A segment can be edited by selecting the segment to be edited.
It is possible to select whether a subnet allocated to the segment can be set automatically or manually in the segment editing. Note, however, that subnets cannot be modified in the L-Platform configuration after the system has been deployed.
If the network to be connected to is specified in the L-Platform template, the specified network remains selected.

The following window displays an example of the **Reconfigure** page when a segment name is clicked. The following window shows the **Reconfigure** page used to subscribe to an L-Platform.
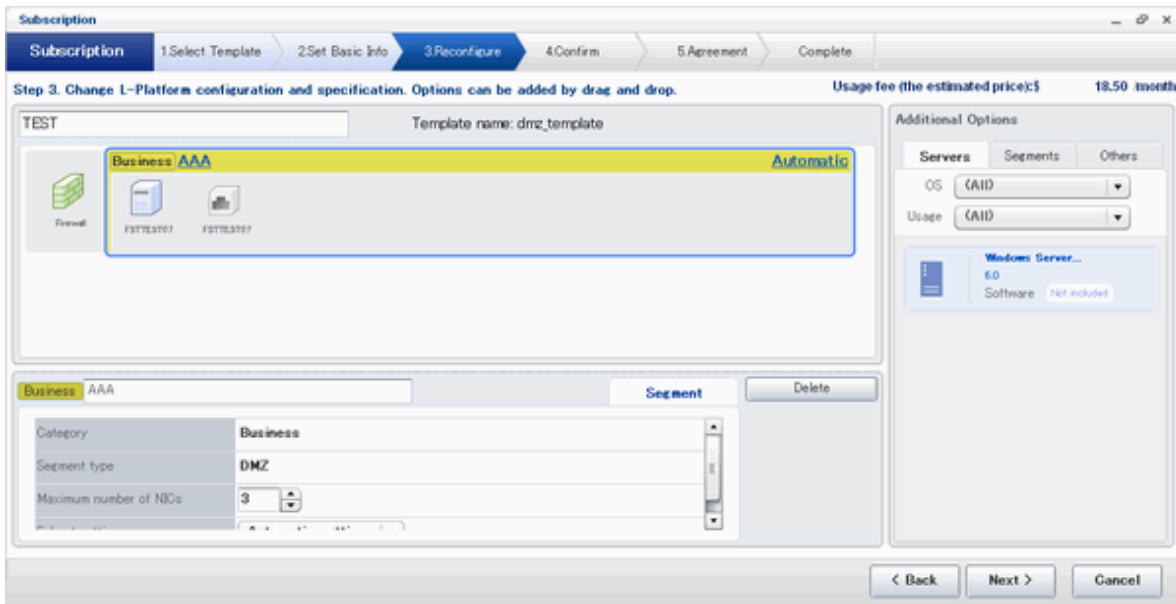
Details of configuration element Segment tab

Part	Description
Category	Specify the category if segments are selected automatically when additions are made by network extension. The default is "Business segment". - Business segment: A segment where business servers are deployed - Management segment: A segment where servers that monitor business or similar are deployed
Segment type	Specify the segment identification information used if segments are selected automatically when additions are made by network extension.
Maximum number of NICs	Specify the maximum number of servers that can be deployed in a segment.
Subnet setting	Specify the IP address of the virtual server to be deployed. The default value is "Automatic setting". - Automatic setting: Set automatically from the subnet - Manual setting: The user specifies a subnet address or selects it from a network resource list

📄 **Note**

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- If the maximum number of segments in the L-Platform template is one, the IP addresses of virtual servers being deployed can be specified in the subnet settings.

. . . .

Additional options Segment tab

Part	Description
Segment	- Extend or reduce a network.

📄 **Note**

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Network extension and reduction

- A network can be extended to the maximum number of segments for an L-Platform Template.

- Since at least one segment is required, it is not possible to delete all segments.

- When a segment is deleted, the connected NIC is also deleted. Since at least one NIC is also required, it is not possible to delete all NICs.

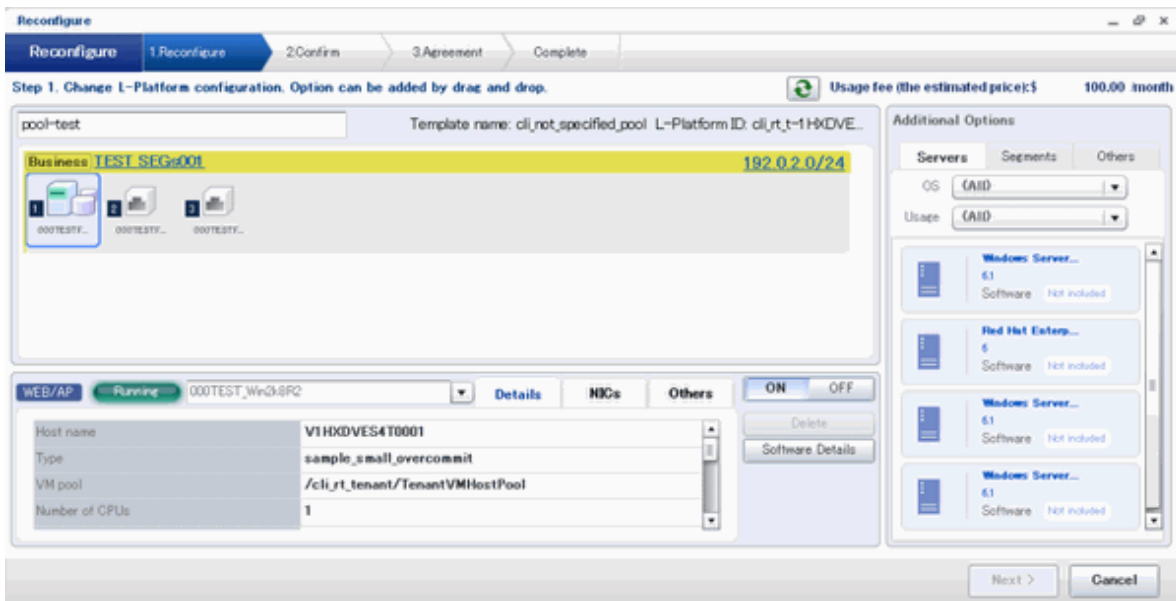- Reduction is not possible while a server is operating.

Edit a Virtual Server

By clicking a virtual server, the virtual server can be edited by selecting the tabs displayed.

Details tab

The virtual server type can be selected using the **Details** tab.

An example of the **Details** tab display is shown below.

Part	Description

Host name	Sets the virtual server name specified in the L-Platform template.
	
	 "usage + (no. of servers + 1)" is set automatically for the virtual server that has been added as an option.
	 To rename, the name must be no more than 85 characters long and not include the following characters:
	
	     `<, >, &, ', " and control characters`
	
	 However, the strings and the number of characters that can be specified may vary depending on the system settings. It is recommended that the name be specified using no more than 15 of the following characters. The value specified for this item cannot consist of only numbers. Hyphens cannot be used for the first character.
	
	     `Alphanumeric characters, underscores ("_") and hyphens ("-")`
	
	 A pre-existing name cannot be specified.

Type	From the drop-down menu, select the type (specifications) of the registered server. The CPU, memory size, and System Disk will be set according to the type of the server selected. However, a message may appear indicating that the server type cannot be changed with some types of virtualization software.

Part		Description
VM pool		From the drop-down menu, select the resource name of the VM pool that is the server deployment destination.
		Contact the infra administrator in the event that an error message is displayed indicating that no existing pool can be selected as the server deployment destination.
CPU	Number of CPUs	Set the number of CPUs of the virtual server.
		Specify the lesser of the two values: Enter either the maximum value entered for image information or enter the maximum value of the VM pool, number of cores of VM hosts with the most numbers of cores.
		A value outside the range cannot be set.
	Performance	Specify CPU performance of the virtual server in GHz.
		Specify the lesser of the two values: Enter either the maximum value entered for image information or enter the maximum value of the VM pool, value of operational frequency of VM hosts with the most value of operational frequency.
		A value outside the range cannot be set.
	Reserved	Specify the reserved CPU performance for the virtual server, in GHz. The minimum value for the reserved clock speed that is guaranteed to be allocated to the virtual server can be specified. It is not possible to specify a value that is greater than the operating clock speed. Any value outside the allowable range cannot be specified. This is not displayed and cannot be specified if the virtualization software is RHEL-KVM.
	[VMware] Shares [Hyper-V] Weight	Specify the relative allotment ratio for determining the allotment of memory size when multiple virtual machines are competing for memory resources. Specify an integer up to 1,000,000.
		If the reconfiguration simplification function is disabled and the easy selection method is set, set values are as follows:
		- Low (500)
		- Standard (1,000)
		- High (2,000)
		This is not displayed and cannot be specified if the virtualization software is RHEL-KVM.
Memory	Size	Specify the memory size of the virtual server in GB.
		Specify the lesser of the two values: Enter either the maximum value entered for image information or enter the maximum value of the VM pool, free memory size of VM hosts with the most free memory size.
		A value outside the range cannot be set.
	[VMware] Reserved [Hyper-V] RAM	Specify the reserved memory size for the virtual server, in GB. The minimum value for the reserved memory size that is guaranteed to be allocated to the virtual server can be specified. It is not possible to specify a value that is greater than the memory size. Any value outside the allowable range cannot be specified. This is not displayed and cannot be specified if the virtualization software is RHEL-KVM.
	[VMware] Shares [Hyper-V] Weight	Specify the relative allotment ratio for determining the allotment of memory size when multiple virtual machines are competing for memory resources. Specify an integer up to 1,000,000.
		If the reconfiguration simplification function is disabled and the easy selection method is set, set values are as follows:
		- Low (500)

Part		Description
		- Standard (1,000)
		- High (2,000)
		This is not displayed and cannot be specified if the virtualization software is RHEL-KVM.
System Disk	Storage pool	From the drop-down menu, select the storage pool to be used.
	Size	The disk capacity of the virtual server is displayed in GB.
		The capacity of the system disk cannot be modified.
Boot priority		Sets the priority order when performing batched power supply operations in either the L-Platform or the tenant. The smaller the value, the higher the priority order.
		Set to 0 when power supply operations are not carried out in a single batch. Note however that this value cannot be set to 0 at the time of new deployment.

Point

The icons displayed in front of the virtual server names correspond to the usage of the virtual servers described in the specification.

- WEB: Web server

- AP: Application server

- DB: Database server

When a virtual server has multiple usages, an icon showing each usage separated by "/" will be displayed.
Example: WEB/AP, AP/WEB/DB etc.

Note

- The server type cannot be changed with some types of virtualization software.

- When the value 0 or no valid value is specified for CPU frequency, CPU reserve clock rate, memory size, or memory reserve size, it is treated as if the value 0.1 were specified. This modification is included in the changed items.

NICs tab

An IP address to be allocated to NIC can be set using the **NICs** tab.
An IP address can be set only when "manual setting" was specified when the segment was edited for a subnet. Note, however, that a subnet cannot be modified when modifying the configuration of a system that has been deployed, and so the IP address cannot be modified either.

The following example displays the **NICs** tab. The following window shows the **Reconfigure** page used to subscribe to an L-Platform.
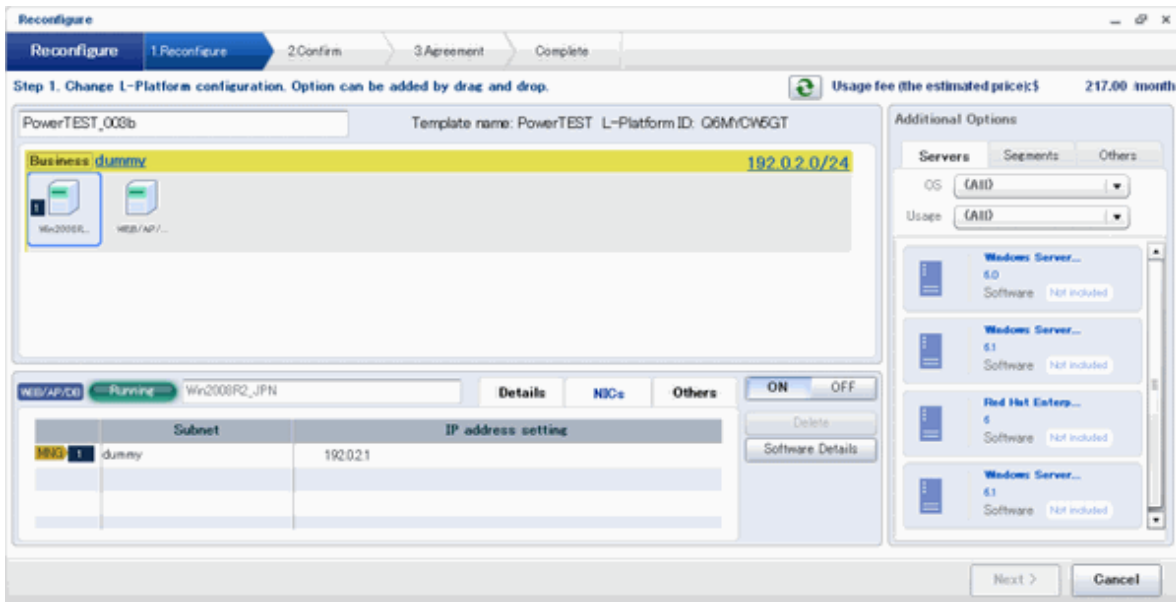
There are two ways of specifying an IP address as follows:

- Automatic
  Sets an IP address automatically from a subnet.

- Manual
  Enters an IP address directly.
  When there is a conflict between the specified IP address and network resources, an error message will be displayed.

An **MNG** icon is displayed for the control NIC.

The following window displays an example of an L-Platform where multiple NICs exist. The following window shows the **Reconfigure** page used to subscribe to an L-Platform.
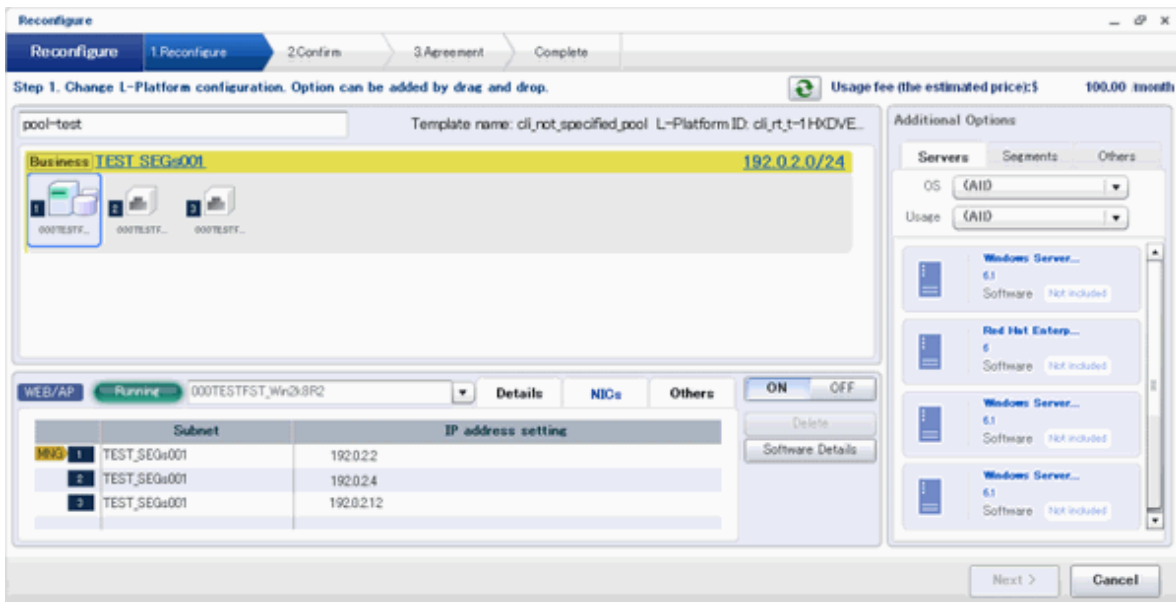

Each NIC is represented by one server. When a server is selected, the same server in each segment is selected.
When a server is selected an icon is displayed showing a number at its lower left hand corner. The number represents an NIC number.
Dark-colored servers are the NICs for administration, and light-colored servers are NICs for business.

When a server is dragged from the Add options and dropped on a segment, as many servers as the number of NICs specified for the segment in the image information are displayed.

NIC Extension and Reduction

This section explains NIC extension and reduction.
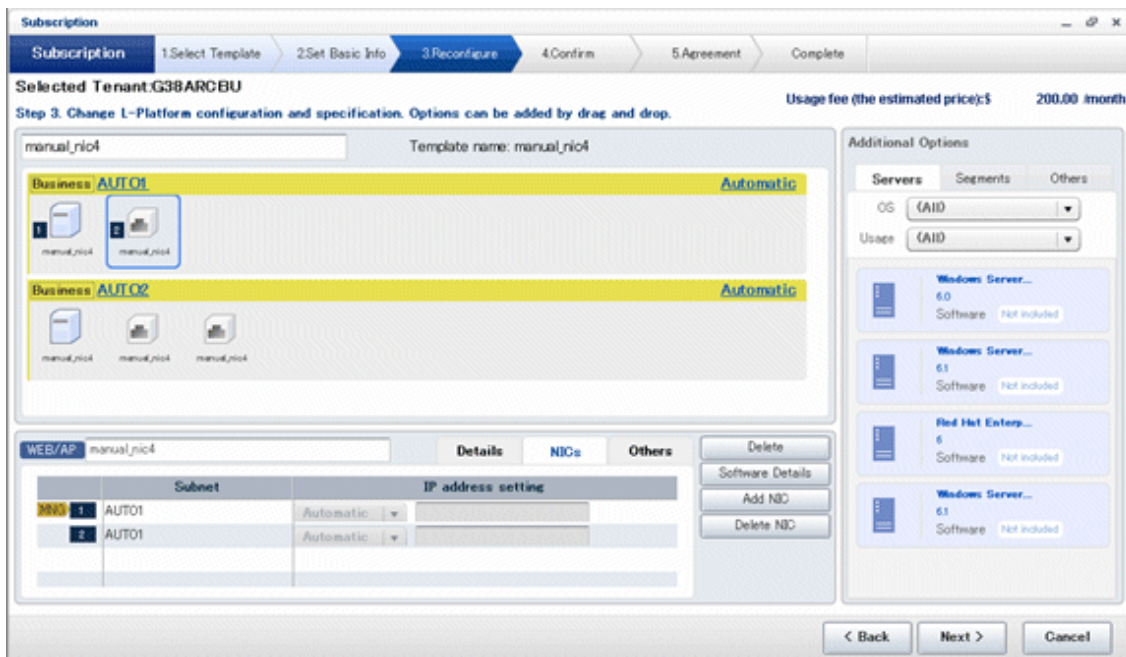
Click the **Add NIC** button to add a business NIC to the same segment as the control NIC.

Click the **Delete NIC** button deletes an NIC.

📌 Note

....

- This is possible only during L-Platform subscription. NIC extension and reduction are not possible after deployment.

- NICs cannot be added if they would exceed the maximum number of connections for the segment.

- Control NICs cannot be deleted.

- Since at least one NIC is required, it is not possible to delete all NICs.

- When extending or reducing NICs for a physical server, configure the number of NICs after settings are made to match the number of NICs of the physical server being used.

....

Others tab

The **Others** tab can be used to check the operating system installed at a virtual server, the middleware and other software, and information on the patches applied to the software.

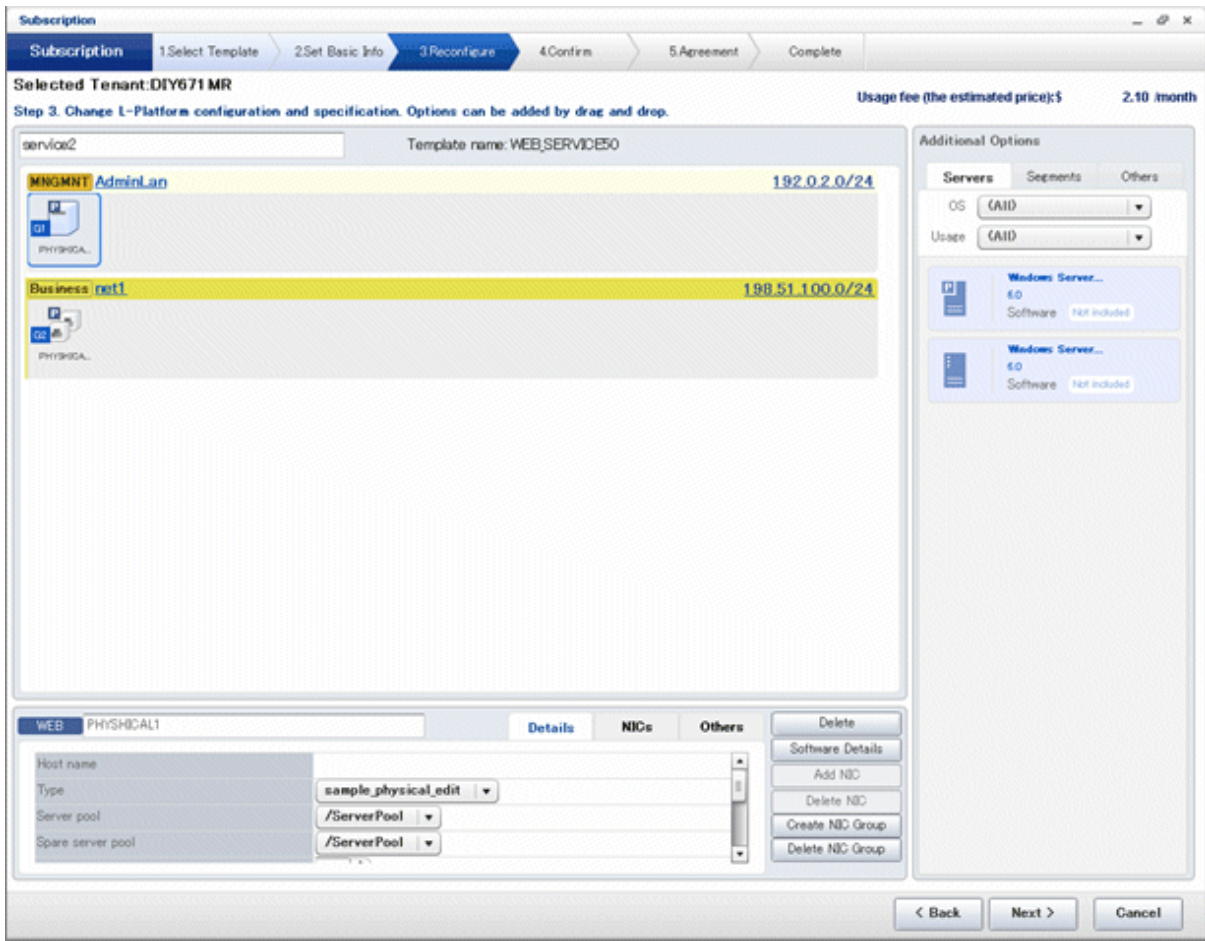A display example of the **Others** tab is shown below.
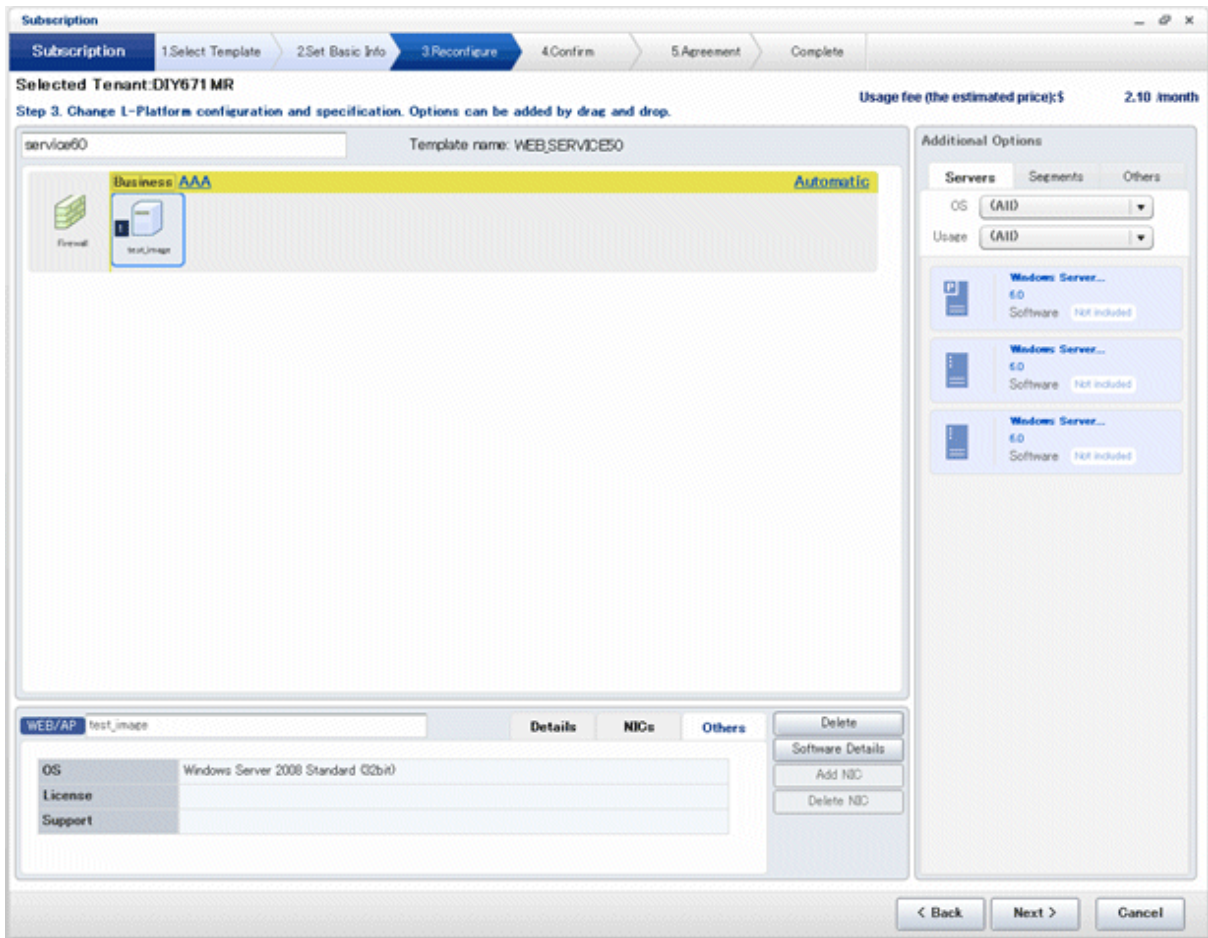
Editing a Physical Server

When a physical server is selected, the allowed physical server depends on the displayed tab.

Details tab

The **Details** tab can be used to select a virtual server type.

A display example of the **Details** tab is shown below.

Part		Description
Host name		Sets the name of a physical server that is in the L-Platform Template. This setting cannot be changed.
Type		From the drop-down menu, select the type (specifications) of the registered server. The CPU, memory size, and System Disk are set according to the selected server type.
Server pool		From the drop-down menu, select the resource name of the server pool that is the server deployment destination. Contact the infra administrator in the event that an error message is displayed indicating that no existing pool can be selected as the server deployment destination.
Reserve server pool		From the drop-down menu, select the resource name of the reserve server pool. Contact the infra administrator in the event that an error message is displayed indicating that no existing pool can be selected as the server deployment destination.
CPU	Number of CPUs	Set the number of CPUs in the physical server. (*) If the upper limit value recorded in the image information differs from the VM pool upper limit value (the number of cores in the VM host with the most cores), a value up to the smaller value can be set. Values outside that range cannot be set.
	performance	Specify the CPU performance of the physical server in GHz units. (*)If the upper limit value recorded in the image information differs from the VM pool upper limit value (the frequency of the VM host with the highest frequency), a value up to the smaller value can be set. Values outside that range cannot be set.

Part		Description
Memory	Size	Specify the memory size of the physical server in GB units. (*) If the upper limit value recorded in the image information differs from the VM pool upper limit value (the free size of the VM host with the largest free memory size), a value up to the smaller value can be set. Values outside that range cannot be set.
System Disk	Storage pool	From the drop-down menu, select the storage pool to be used.
	Size	The disk capacity of the physical server is displayed in GB. The capacity of the system disk cannot be modified.
Boot priority		Sets the priority order when performing batched power supply operations in either the L-Platform or the tenant. Range:1-256.The smaller the value, the higher the priority order. Set to 0 when power supply operations are not carried out in a single batch. Note however that this value cannot be set to 0 at the time of new deployment.

*: The server pool physical server with details closest to the specified CPU and memory information is allocated.

Estimated charges are calculated according to the values entered for the CPU performance and memory capacity when newly deploying a physical server. The performance of the actual server deployed will be the closest possible to the entered values. For this reason, the estimated charges displayed may differ to actual charges. Estimated charges for physical servers that have already been deployed will be calculated according to the actual CPU performance and memory capacity.

NICs tab

Use the **NICs** tab to set the IP address allocated to an NIC.

Note that the IP address can be set only if "manual setting" is specified for the subnet during segment editing. However, since the subnet cannot be changed by reconfiguration after a system is deployed, IP address changes are also not possible.

A display example of the **NICs** tab is shown below. Note that the window shown below is the L-Platform subscription **Reconfigure** page.
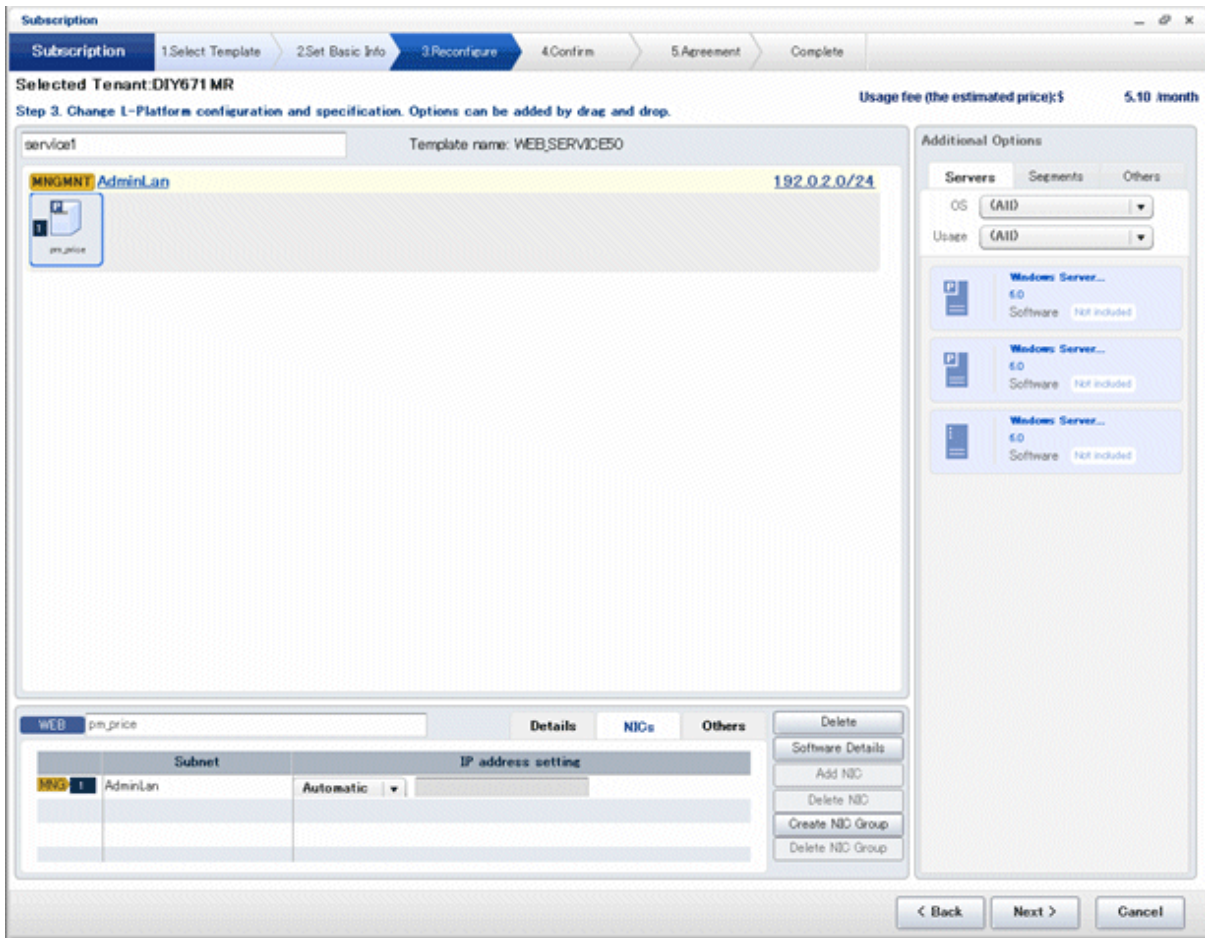
The following two methods are available for specifying an IP address:

- Automatic
  The IP address is set automatically from the subnet.

- Manual
  Enter the IP address directly.
  An error message is displayed if the specified IP address is inconsistent with the network resources.

The **MNG** icon is displayed for the control NIC.

The window below is an example of the display when there are multiple NICs. Note that the window shown below is the L-Platform subscription **Reconfigure** page.
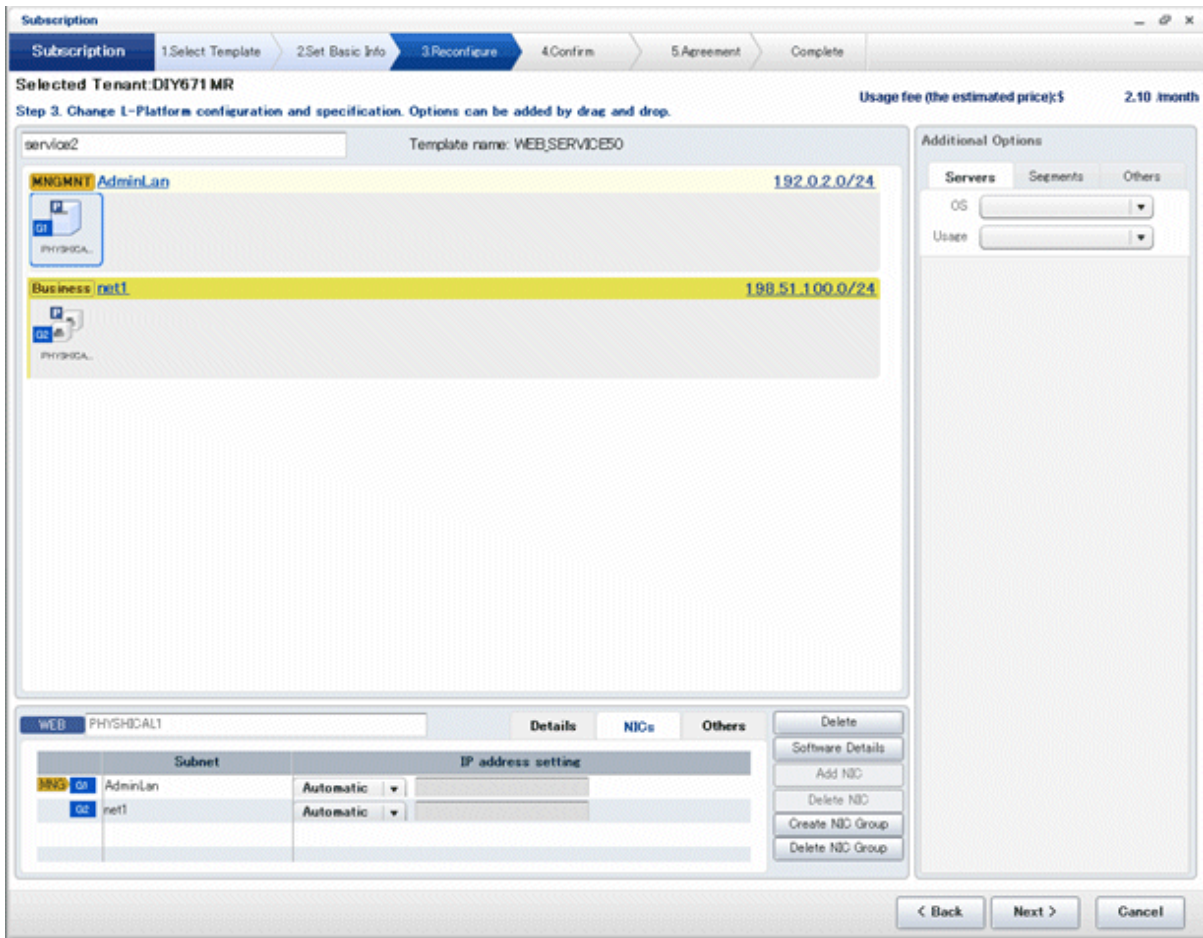
NIC1 is represented by one physical server. When a server is selected, the selected state occurs for all the same servers. A numeric icon is displayed to the bottom left of selected servers. It indicates the NIC number.
Dark-colored servers indicate management NICs, and light-colored servers indicate business NICs.

If a segment is dragged and dropped from the addition option, the number of servers displayed matches the number of NICs specified in the image information of the segment.

NIC Grouping (for Physical Servers)

This section explains NIC grouping.
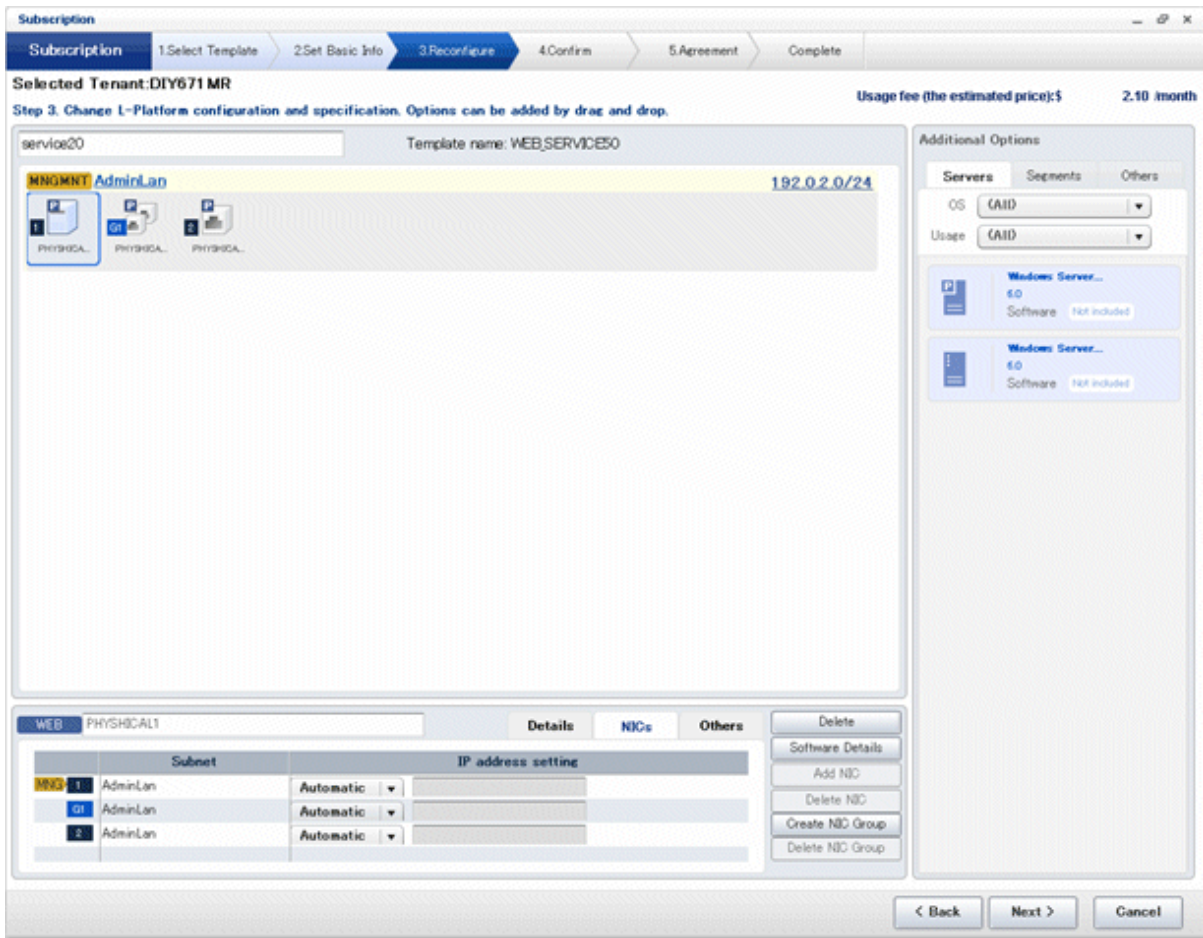
- Making a group

    Select multiple checkboxes, and then click the **Form NIC Group** button. However, Multidata input NIC cannot be grouped. (Control NICs are okay.)

- Cancelling a grouping

    Select multiple checkboxes, and then click the **Delete NIC Group** button.

Note

- This is possible only during L-Platform subscription. NIC groups cannot be made or cancelled after deployment.

- Two NICs can be grouped. Three or more NICs cannot be grouped.

Others tab

The **Others** tab can be used to check the operating system installed at a physical server, the middleware and other software, and information on the patches applied to the software.

An example of the **Others** tab is shown below.
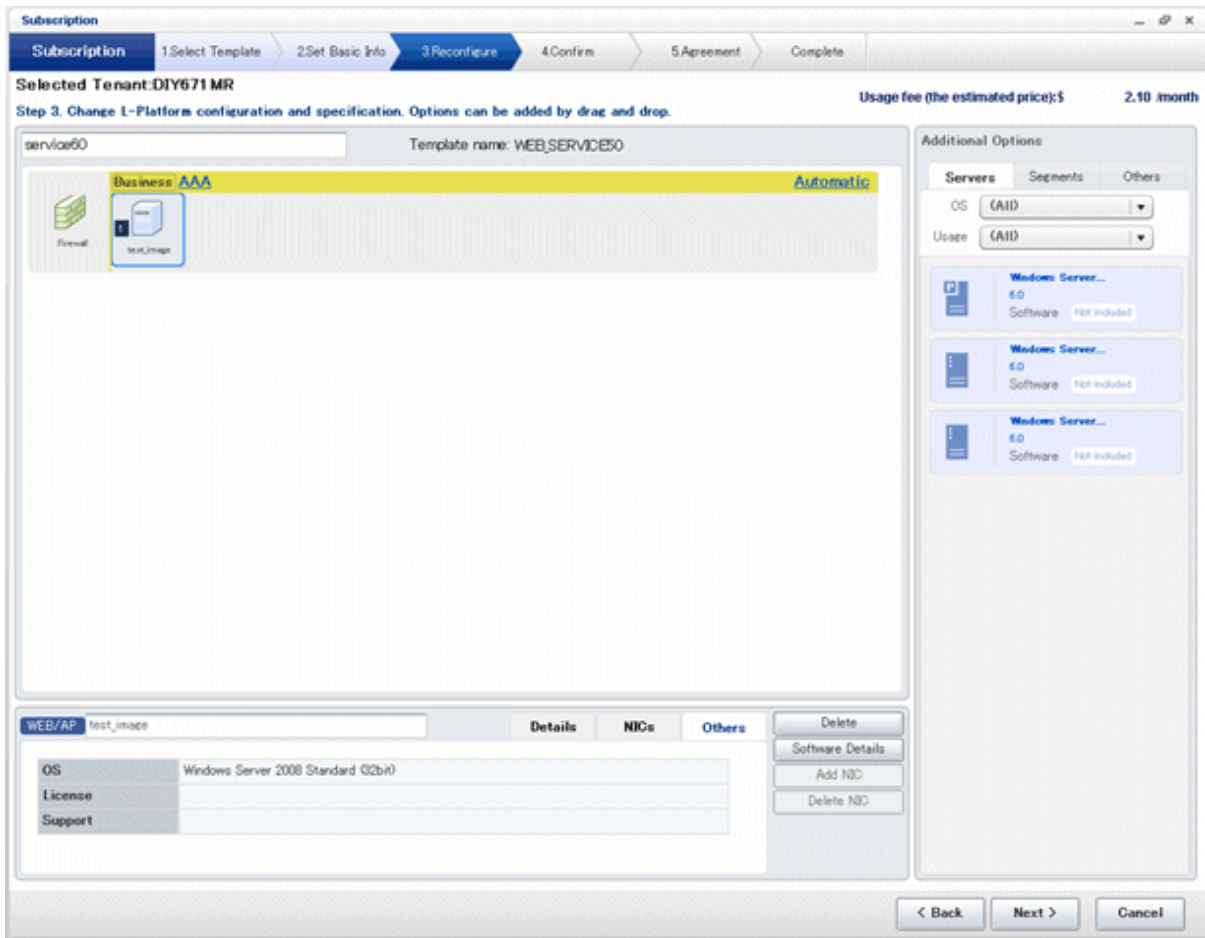
Edit a Disk (for a Virtual Server)

A virtual server to which a disk has been added can be selected. By clicking the button (▼) located to the right of the virtual server name, a selection list of virtual servers and disks is displayed. Select a disk on the list.

Only extended disks can be modified when editing a disk. System disks cannot be edited.

The following example displays the **Reconfigure** page when a disk is selected. The following window shows the **Reconfigure** page used to subscribe to an L-Platform.

Part	Description
Disk name	"disk + serial number" is set automatically as the disk name. The serial number is allocated according to the following rules. - Allocation of serial number starts from 0 for the disks registered in the L-Platform template. - "Number of disks + 1" is allocated to a disk added using Add options. To rename a disk, the new name must be no more than 85 characters long and not include the following characters: `<, >, &, ', " and control characters` A pre-existing name cannot be specified.
Storage pool	From the drop-down menu, select the deployment destination resource pool.
Size	Specify the disk capacity of the virtual server in GB. Specify the lesser of the two values: Enter either the maximum value entered for image information or enter the maximum value of the storage pool, free space size of storages with the most free space size. A value outside the range cannot be set.

Note

- If the virtualization software is Hyper-V, the maximum number of disks after addition is four, including the system disk.

- Only existing disks can be added or deleted if the virtualization software is RHEL-KVM. New disks cannot be added.

Edit a disk (for a physical server)

Note

When extending disks, a physical server must be stopped.

A physical server to which a disk has been added can be selected. By clicking the button (▼) located to the right of the physical server name, a selection list of physical server and disks is displayed. Select a disk on the list.

Only extended disks can be modified when editing a disk. System disks cannot be edited.

The following example displays the **Reconfigure** page when a disk is selected. The following window shows the **Reconfigure** page used to subscribe to a service.

Part	Description
Disk name	"disk + serial number" is set automatically as the disk name. The serial number is allocated according to the following rules. - Allocation of serial number starts from 0 for the disks registered in the L-Platform template. - "Number of disks + 1" is allocated to a disk added using Add options. To rename a disk, the new name must be no more than 85 characters long and not include the following characters: `<, >, &, ', " and control characters` A pre-existing name cannot be specified.
Storage pool	From the drop-down menu, select the deployment destination resource pool.If an existing disk is selected, modification is not possible.
Size	Specify the disk capacity of the virtual server in GB. Specify the lesser of the two values: Enter either the maximum value entered for image information or enter the maximum value of the storage pool, free space size of storages with the most free space size. A value outside the range cannot be set.

Server tab

"Physical server" and "Virtual server" can be selected from **Type**, enabling only servers of the selected type to be displayed.

4.4 Display Event Logs

Event logs of the errors that occurred while using the L-Platform functions can be displayed on the **Event Log** page.

Follow the steps below to display event logs:

1. Select **Event Log** from the operation menu of the **L-Platform** page.
   A list of event logs will be displayed.

Up to 100 logs are displayed on the **Event log** page for duration of up to 14 days starting from the most recent log.

Refer to "Message Stating with VSYS" in "Messages CE" for information on the messages displayed in the event log.

4.5 Select Forward Destination of Application Process

When the application process is enabled, the forward destination of the application process must be selected to use the following functions:

- L-Platform subscription

- L-Platform reconfiguration

- Cancel L-Platform

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The application process is set by the infra administrator.
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Note
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If the pop-up blocker is enabled and the URL of the ROR Console is not registered with the 'Address of web site to allow' list, the 'Forward screen' window will not be displayed.
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Follow the steps below to select the forward destination of the application process:

1. A **Forward screen** window like the one below is displayed when L-Platform subscription, L-Platform reconfiguration, or L-Platform cancellation is performed.

Item	Description
Forward destination	Select an approver who is the forward destination of the application process. If the process has been set to require no approval, the field will be displayed in grey and cannot be selected.
Reason for application	Specify the reason for application using 100 or less characters.

2. Specify the item and click the **Forward** button.

   A message notifying the forward result will be displayed.
   When forwarding is successful, the subscriber will receive an application acceptance email.

3. Confirm the message, click the **Close** button, and close the **Forward screen** window.

🐸 Note

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If an error message is displayed on the **Forward screen**, notify the infra administrator of the contents displayed on the window. After closing the **Forward screen**, close the L-Platform window also.
If an error message is displayed on the forward screen when a service is subscribed to or modified, that subscription will be saved.

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🅿 Point

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Approving the application process

When an application process is forwarded, an email requesting an approval will be sent to the approver at the forward destination. An approval for the application must be obtained from the approver.
Refer to "Chapter 5 Request " for information on how to approve an application process.
If the process has not been approved, an email requesting an assessment will be sent to the infra administrator.

Action when the mail is not sent

When the email is not sent to the subscriber or the approver, confirm whether the email address registered in the ROR Console is correct.
If it is correct, contact the system administrator to report the user ID and the process instance name for subscription.
When the assessment request email is not sent to the infra administrator, contact the system administrator to report the user ID and the process instance name.

Check the application process status

The subscriber and the approver can check the status of application process.
Refer to "Chapter 5 Request " for information on how to check the status of application process.

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4.6 How to Use the L-Platform

This section explains how to use the L-Platform after it is deployed.

Based on the information below, a deployed L-Platform can be accessed using the remote desktop function.

Item	Value
IP address	1. The IP address can be confirmed using the following procedures. 2. Select **Server List** on the **Management** page of **L-Platform Management.** 3. Check IP address of the target server from the list displayed.
User ID	[Windows] Administrator [Linux] Root
Password	The initial password can be confirmed using the following procedures: 1. Select **Service List** on the **Management** page of **L-Platform Management.** 2. Select the target L-Platform and click the **Details** button. 3. Select the target virtual server from the list displayed and click the **Initial PWD** button.

Note

The initial password is already set up after the L-Platform is deployed. Be sure to change the password when the L-Platform starts to operate.

Chapter 5 Request

This chapter explains how to operate the application list.

🔔 Note

- Application processes are determined by the Infrastructure Administrator and set by the System Administrator. The application list can be used only if an application process is set.

- If Internet Explorer enhanced security (IE ESC) is enabled, the **X** button on popup windows does not operate correctly.
  Refer to the following website for information on how to disable Internet Explorer enhanced security:
  http://www.microsoft.com

5.1 Checking an Application Status

The application status and past application results can be checked for the following applications:

- Subscribe L-Platform

- L-Platform reconfiguration

- Cancel L-Platform

Perform the following steps to check the status of an application process:

1. Select **Request** from the ROR console

2. Select either **My Tasks** or **My Completed Tasks** from the **Task Filters** drop-down list on the My Task window.

   - To check the status of applications in progress

     Select **My Tasks** from the **Task Filters** drop-down list on the My Task window. A list of tasks with the status **Active** will be displayed.

- To check past application results

    Select **My Completed Tasks** from the **Task Filters** drop-down list on the My Task window. A list of tasks with the status **Completed** will be displayed.

The priority level of a task can be specified on the **Summary** tab under **My Tasks** using numerals from 0 to 2147483647. The default value is 8.
The higher the number of a task, the higher its priority level. Setting the priority level of tasks also enables them to be sorted in order of priority in task lists.

3. Select the process instance task to be checked and click on the **Details** tab.
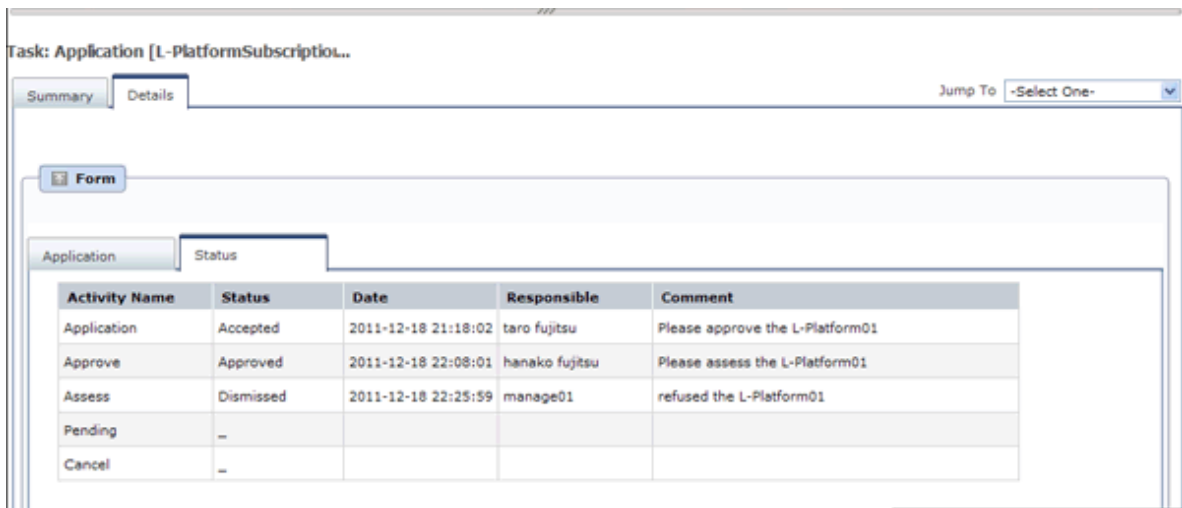
    Select the tasks with the following activity names:

    - When checking the status of applications in progress

        - Cancel

    - When checking past application results

        - Apply or cancel

4. Select the **Status** tab on the **Form** panel.

    A list of either application statuses or past application results will be displayed in chronological order.

    Application results are displayed as shown in the image below. It indicates that approval was given to an application which was then dismissed upon assessment.

Item	Description	
Activity Name	The task activities will be displayed. Application, Approve, Assess, Pending or Cancel will be displayed. Approve will only be displayed when the application process is set to 'ApproverOnly', while Assess will only be displayed when the application process is set to 'JudgeOnly'.	
Status	Application	Accepted
	Approve	One of the following responses will be displayed: - Approval waiting - Approved - Approved (Error) - Rejected - _ (*1)

Item		Description
	Assess	One of the following responses will be displayed: - Approval waiting - Accepted - Accepted (Error) - Dismissed - _ (*1) - Blank (*2)
	Pending	One of the following responses will be displayed: - Pending - Cancel - _ (*1) - Blank (*2)
	Cancel	One of the following responses will be displayed: - Cancel - _ (*1) - Blank (*2)
Date		The date and time of execution will be output in the following format: YYYY-MM-DD HH:MM:SS
Responsible		Displays the executor.
Comment		Displays any comments that were input at the time of Application, Approve, Assess or Pending.

*1: Displayed when the process was not executed.

*2: Displayed when the process has not been executed.

The following illustrates an example of the application status confirmation window:

- When the application process is set to 'Default'

  Indicates that the application has been accepted and the task is complete.

Activity Name	Status	Date	Responsible	Comment
Application	Accepted	2011-12-19 02:41:59	taro fujitsu	Please approve the L-Platform05
Approve	Approved	2011-12-19 02:44:17	hanako fujitsu	Approved the L-Platform05. Please assess this.
Assess	Accepted	2011-12-19 02:45:47	manage01	Assessed the L-Platform05.
Pending	_			
Cancel	_			

- When the application process is set to 'ApproverOnly'

  Indicates that the application is awaiting approval.

Activity Name	Status	Date	Responsible	Comment
Application	Accepted	2011-12-19 02:13:46	taro fujitsu	Please approve the L-Platform04
Approve	Approval waiting			
Pending				
Cancel				

- When the application process is set to 'JudgeOnly'

Indicates that an error has occurred with the application during acceptance of the assessment and the task has been reserved.

Activity Name	Status	Date	Responsible	Comment
Application	Accepted	2011-12-19 02:29:31	taro fujitsu	Please assess the L-Platform05
Assess	Accepted (Error)	2011-12-19 02:34:28	manage01	
Pending	Pending			
Cancel				

5.2 Cancelling an Application

Subscribers can cancel an application that they have issued.
A subscriber is a user who issued any of the following applications:

- Subscribe use L-Platform

- L-Platform reconfiguration

- Cancel L-Platform

Perform the following steps to cancel an application process:

1. From the ROR Console, select **Request** tab.
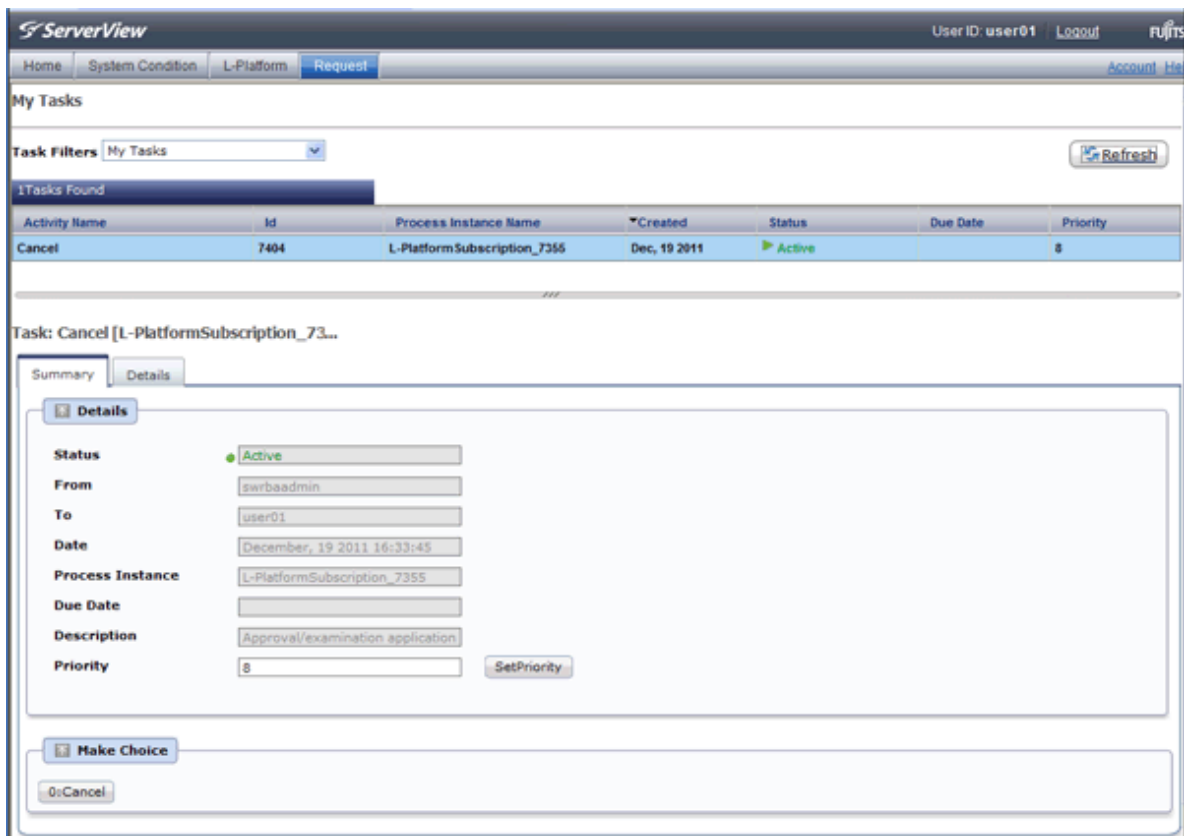
2. In the Task Filters drop-down list on the My Tasks window, select **My Tasks**.
   A list of tasks with the status Active is displayed.
   In the **Priority** field in **My Tasks** under the **Summary** tab, give the tasks a priority using a number between 0 and 2147483647.
   The default value is 8.
   The higher the number of a task, the higher its priority level. Setting the priority level of tasks also enables them to be sorted in order of priority in task lists.

3. Select the task with the activity name "Cancel" on the process instance that you want to cancel, and then click the **Details** tab.

4. Select the **Application** tab on the **Form** panel.
   Check the content of the application.

5. Click the **0: Cancel** button on the Make Choice panel.

   The selected application process is cancelled.

🕮 **Note**

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- If the **0: Cancel** button on the Make Choice panel is clicked without the **Details** tab being selected or without the **Status** tab
  on the **Details** tab being selected, the following message is displayed:

All the forms are not accessed in Details Tab. Do you want to continue?

  To continue processing without checking the form, click the **OK** button. To check the form, click the **Cancel** button, and then
  select the **Details** tab or select the **Status** tab on the **Details** tab.

- If the error below is issued when cancelling an application, provide the Tenant Administrator with the name of the process instance that issued the error and the error details, and ask for the error to be investigated and fixed.
  When the **Details** button is clicked on the window shown below, error details are displayed.
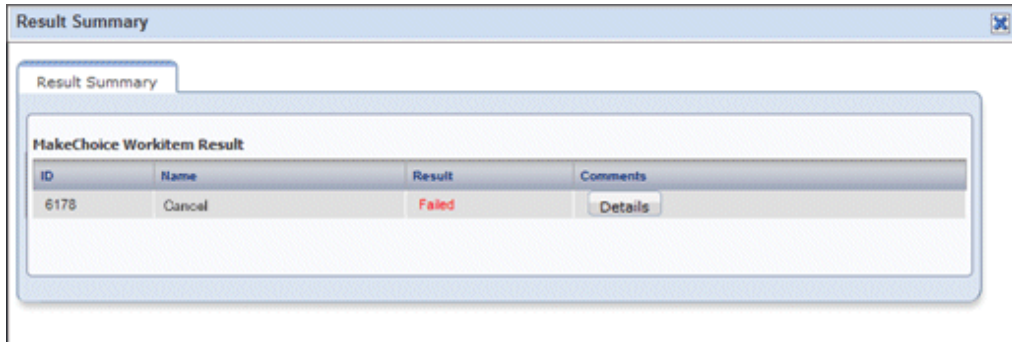
Chapter 6 Account

This chapter explains account operations.

6.1 Referencing User Information

The **Account** window can be used to display the user information of logged in users. Perform the following operations to view user information.

1. Select the **Account** link on the ROR Console.
   The **Account** window is displayed in a new window.

Item	Explanation
User ID	Displays the user ID of the user
Description	Displays an explanation of the user
Role	Displays the user's role
Personal Information	
E-mail address	Displays the user's email address
Name	Displays the user's name
Company name or organization name	Displays the company name or organization name
Emergency Contact Information	
E-mail address	Displays the email address that receives emergency notifications
Telephone number	Displays the phone number for emergency contact
Modify account button	When clicked, displays the Modiry account window used to change user information
Change password button	When clicked, displays the Change password window used to change a password

Note

With some directory services operation settings, the **Modify account** and **Change password** buttons may not be displayed. Directory services operation settings are set by the System Administrator.

2. Click the **Close** button to close the **Account** window.

6.2 Changing User Information

The **Modify account** window can be used to change the user information of a logged in user. Perform the following operations to change the user information:

1. Click the **Modify account** button on the **Account** window.
   The **Modify account** window is displayed.

2. On the **Modify account** window, edit the values of the items to be changed.

Item	Explanation
User ID	Displays the user ID of the user. This cannot be changed.
Description	Enter an explanation of the user in up to 256 characters.
Role	Displays the user's role. This cannot be changed.
Personal Information	
E-mail address	Specify the user's email address in up to 64 characters. This specification is mandatory.
Name	Specify the user's name (first name, middle name and last name) using a maximum of 15 characters for each name. This specification is mandatory, but the middle name can be omitted.
Company name or organization name	Specify the company name or organization name in up to 30 characters.

Item	Explanation
Emergency Contact Information	
E-mail address	Specify the email address that receives emergency notifications, using up to 64 characters.
Telephone number	Specify the phone number to be used for emergency contact.

3. Click the **Confirm** button.

4. The window for confirming changed content is displayed. Check the values, and then click the **Modify** button.
   To change the values again, click the **Back** button to return to the **Modify account** window.

5. Once the **Modify** button is clicked, the user information is updated and the modification completion window is displayed.

6. Click the **Back to Account** button to return to the **Account** window.

6.3 Changing Passwords

The **Change password** window can be used to change the password of a logged in user. Perform the following operations to change a password:

1. Click the **Change password** button on the **Account** window.
   The **Change password** window is displayed.

Item	Explanation
Current password	Enter the current password. This specification is mandatory.
New password	Enter the new password. Specify between 8 and 64 characters using single-byte alphanumerics and symbols. The password is case-sensitive. This specification is mandatory.
New password (confirm)	Re-enter the new password for confirmation purposes. This input is mandatory.

2. Enter the current password and the new password, and then click the **Change** button.
   The password is changed and the modification completion window is displayed.

3. Click the **Back to Account** button to return to the **Account** window.

Glossary

admin client

A terminal (PC) connected to an admin server, which is used to operate the GUI.

admin LAN

A LAN used to manage resources from admin servers.
It connects managed servers, storage, and network devices.

admin server

A server used to operate the manager software of Resource Orchestrator.

agent

The section (program) of Resource Orchestrator that operates on managed servers.

cloning

Creation of a copy of a system disk.

cloning image

A backup of a system disk, which does not contain server-specific information (system node name, IP address, etc.), made during cloning.
When deploying a cloning image to the system disk of another server, Resource Orchestrator automatically changes server-specific information to that of the target server.

Cloud Edition

The edition which can be used to provide private cloud environments.

directory service

A service for updating and viewing the names (and associated attributes) of physical/logical resource names scattered across networks, based on organizational structures and geographical groups using a systematic (tree-shaped structure) management methodology.

Domain

A system that is divided into individual systems using partitioning. Also used to indicate a partition.

Dual-Role Administrators

The administrators with both infrastructure administrator's and tenant administrator's role.

dynamic memory

A function that optimizes physical memory allocation for virtual machines, depending on their execution status on Hyper-V.

global pool

A resource pool that contains resources that can be used by multiple tenants.
It is located in a different location from the tenants.
By configuring a global pool with the attributes of a tenant, it becomes possible for tenant administrators to use the pool.

GUI (Graphical User Interface)

A user interface that displays pictures and icons (pictographic characters), enabling intuitive and easily understandable operation.

Hyper-V

Virtualization software from Microsoft Corporation.

Provides a virtualized infrastructure on PC servers, enabling flexible management of operations.

image file

A system image or a cloning image. Also a collective term for them both.

infrastructure administrator

A user who manages the resources comprising a data center.
infra_admin is the role that corresponds to the users who manage resources.
Infrastructure administrators manage all of the resources comprising a resource pool (the global pool and local pools), provide tenant administrators with resources, and review applications by tenant users to use resources.

LDAP (Lightweight Directory Access Protocol)

A protocol used for accessing Internet standard directories operated using TCP/IP.

LDAP provides functions such as direct searching and viewing of directory services using a web browser.

license

The rights to use specific functions.
Users can use specific functions by purchasing a license for the function and registering it on the manager.

local pool

A resource pool that contains resources that can only be used by a specific tenant.

They are located in tenants.

L-Platform

A resource used for the consolidated operation and management of systems such as multiple-layer systems (Web/AP/DB) comprised of multiple L-Servers, storage, and network devices.

L-Platform template

A template that contains the specifications for servers, storage, network devices, and images that are configured for an L-Platform.

L-Server

A resource defined using the logical specifications (number of CPUs, amount of memory, disk capacity, number of NICs, etc.) of the servers, and storage and network devices connected to those servers.
An abbreviation of Logical Server.

L-Server template

A template that defines the number of CPUs, memory capacity, disk capacity, and other specifications for resources to deploy to an L-Server.

LUN (Logical Unit Number)

A logical unit defined in the channel adapter of a storage unit.

MAC address (Media Access Control address)

A unique identifier that is assigned to Ethernet cards (hardware).

Also referred to as a physical address.

Transmission of data is performed based on this identifier. Described using a combination of the unique identifying numbers managed by/assigned to each maker by the IEEE, and the numbers that each maker assigns to their hardware.

managed server

A collective term referring to a server that is managed as a component of a system.

manager

The section (program) of Resource Orchestrator that operates on admin servers.
It manages and controls resources registered with Resource Orchestrator.

migration

The migration of a VM guest to a different VM host. The following two types of migration are available:

- Cold migration

  Migration of an inactive (powered-off) VM guest.

- Live migration

  Migration of an active (powered-on) VM guest.

network device

The unit used for registration of network devices.
L2 switches and firewalls fit into this category.

NIC (Network Interface Card)

An interface used to connect a server to a network.

OS

The OS used by an operating server (a physical OS or VM guest).

overcommit

A function to virtually allocate more resources than the actual amount of resources (CPUs and memory) of a server.
This function is used to enable allocation of more disk resources than are mounted in the target server.

physical network adapter

An adapter, such as a LAN, to connect physical servers or VM hosts to a network.

physical OS

An OS that operates directly on a physical server without the use of server virtualization software.

physical server

The same as a "server". Used when it is necessary to distinguish actual servers from virtual servers.

primary server

The physical server that is switched from when performing server switchover.

private cloud

A private form of cloud computing that provides ICT services exclusively within a corporation or organization.

public LAN

A LAN used for operations by managed servers.
Public LANs are established separately from admin LANs.

resource

General term referring to the logical definition of the hardware (such as servers, storage, and network devices) and software that comprise a system.

resource pool

A unit for management of groups of similar resources, such as servers, storage, and network devices.

role

A collection of operations that can be performed.

ROR console

The GUI that enables operation of all functions of Resource Orchestrator.

rule set

A collection of script lists for performing configuration of network devices, configured as combinations of rules based on the network device, the purpose, and the application.

server

A computer (operated with one operating system).

server name

The name allocated to a server.

server virtualization software

Basic software which is operated on a server to enable use of virtual machines. Used to indicate the basic software that operates on a PC server.

Single Sign-On

A system among external software which can be used without login operations, after authentication is executed once.

surrogate pair

A method for expressing one character as 32 bits.
In the UTF-16 character code, 0xD800 - 0xDBFF are referred to as "high surrogates", and 0xDC00 - 0xDFFF are referred to as "low surrogates". Surrogate pairs use "high surrogate" + "low surrogate".

system disk

The disk on which the programs (such as the OS) and files necessary for the basic functions of servers (including booting) are installed.

system image

A copy of the contents of a system disk made as a backup.
Different from a cloning image as changes are not made to the server-specific information contained on system disks.

tenant

A unit for the division and segregation of management and operation of resources based on organizations or operations.

tenant administrator

A user who manages the resources allocated to a tenant.
tenant_admin is the role for performing management of resources allocated to a tenant.
Tenant administrators manage the available space on resources in the local pools of tenants, and approve or reject applications by tenant users to use resources.

tenant folder

A resource folder that is created for each tenant, and is used to manage the resources allocated to a tenant.

L-Servers and local pools are located in tenant folders. Also, it is possible to configure a global pool that tenant administrators can use.

tenant user

A user who uses the resources of a tenant, or creates and manages L-Platforms, or a role with the same purpose.

URL (Uniform Resource Locator)

The notational method used for indicating the location of information on the Internet.

virtual server

A virtual server that is operated on a VM host using a virtual machine.

VM (Virtual Machine)

A virtual computer that operates on a VM host.

VMware

Virtualization software from VMware Inc.
Provides a virtualized infrastructure on PC servers, enabling flexible management of operations.

Web browser

A software application that is used to view Web pages.

Xen

A type of server virtualization software.